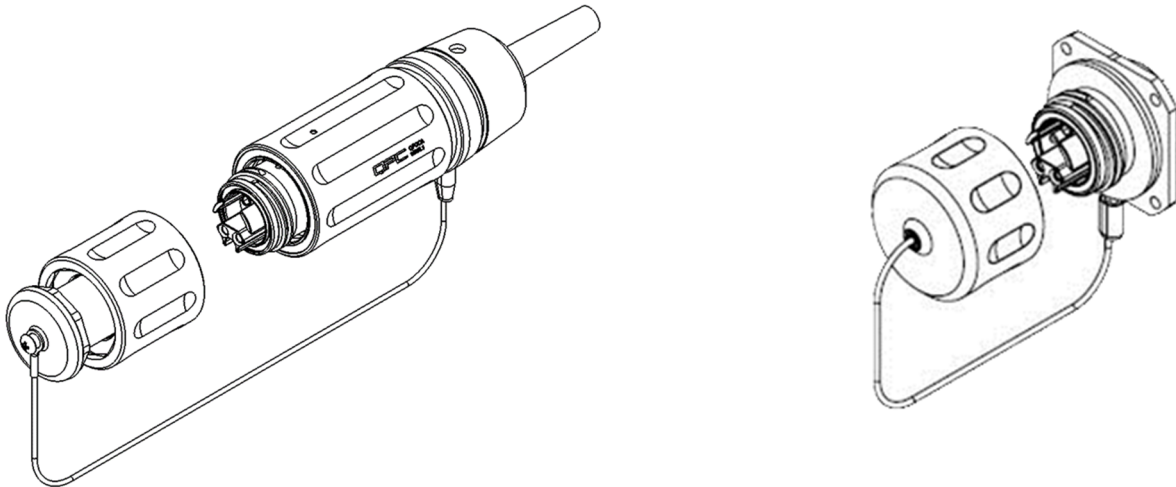


QFoca Connectors

Customer Assembly Instructions



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Design Engineer

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Release Date: 04/06/2026

Revision: 0
Revision Date: --/--/----

SCOPE

This document describes the Assembly Instructions for the QFoca product line. Please use the table of contents above to locate the applicable section(s) based on the products needing assembly.

CONFIGURATION TABLE

Plugs	Page	Receptacles	Page
4 Channel		4 Channel	
Straight Backshell, Boot	3	No Backshell	37
Straight Backshell, Mesh Grip (G1)	7	Straight Backshell, Boot	40
		Straight Backshell, Mesh Grip (G1)	43
6 Channel (EZ)			
Straight Backshell, Mesh Grip (G1)	11	12 Channel	
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Straight Backshell, Mesh Grip (G1)	19		
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Straight Backshell, Boot	27	Straight Backshell, Mesh Grip (G1)	58
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SAFETY

Please use caution when following these instructions. This is not an exhaustive list of safety guidelines, refer to local regulations and your own company's policies.

- Be careful when handling bare fibers as sharp ends may penetrate skin.
- Wear appropriate personal protective equipment such as gloves and safety glasses.
- Track all fiber scraps and dispose of properly. Tape may be used to remove scraps from the worktable.
- Wash hands after handling fiber and before touching eyes or face.
- Do not look down fiber ends unless certain there is no light source coming through the fiber.
- Keep all combustible materials safely away from curing ovens.

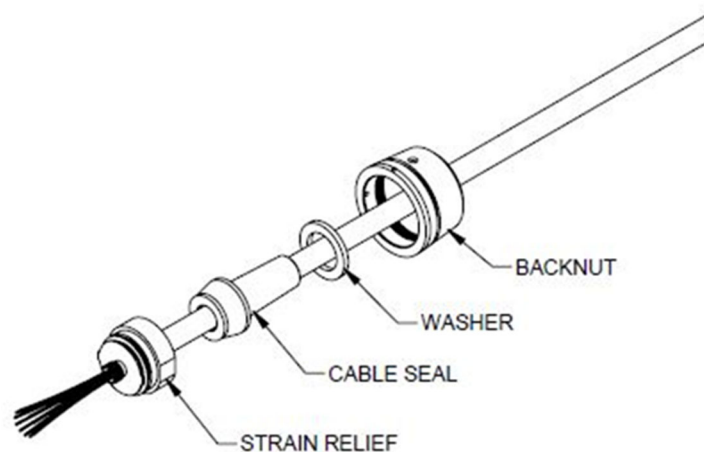
STANDARD & SPECIALTY ASSEMBLY TOOLS

Refer to QPC CAI-TOOLS for a list of Standard & Specialty Assembly Tools used in this instruction.

PLUG, 4 CHANNEL, STRAIGHT BACKSHELL, BOOT

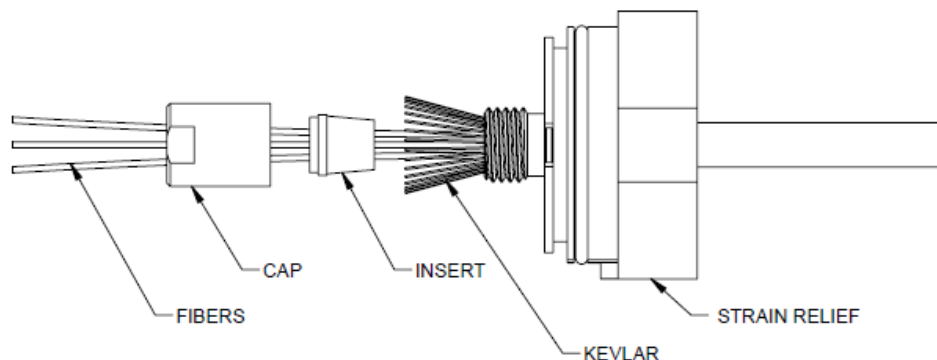
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to torque to the values in the Torque Table found in the Appendix.

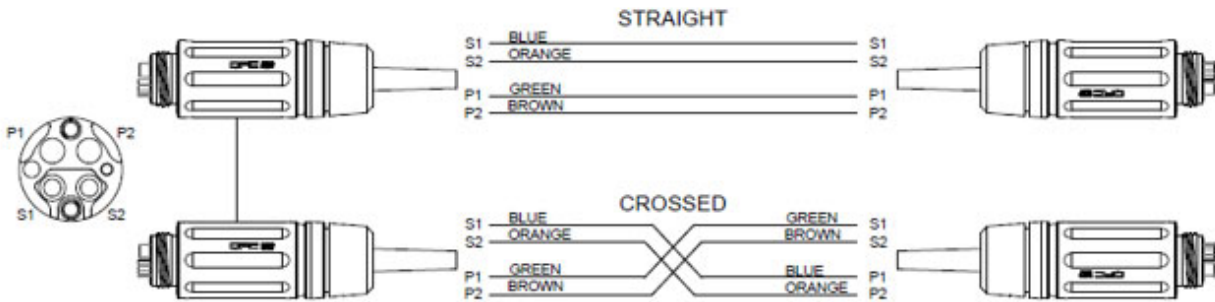


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

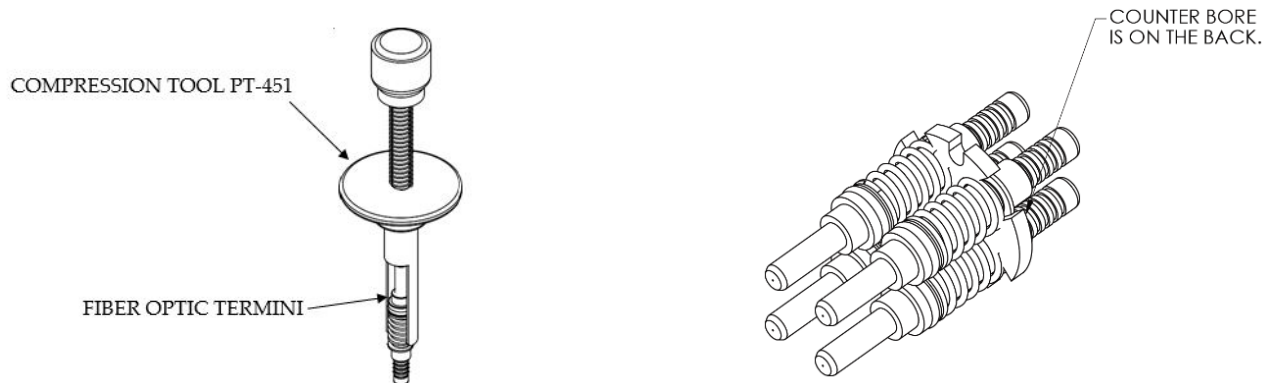
POPULATE INSERT

Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plat. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

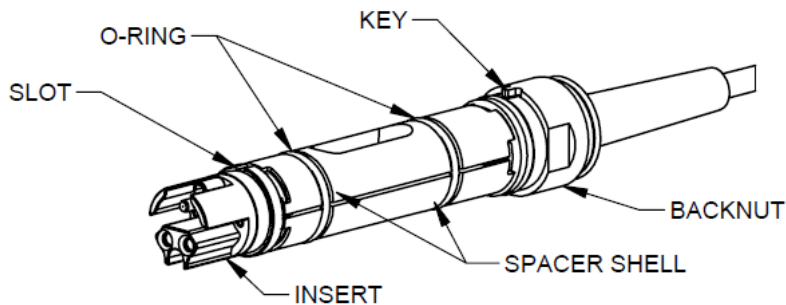


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1 & S2.

CONNECTOR ASSEMBLY

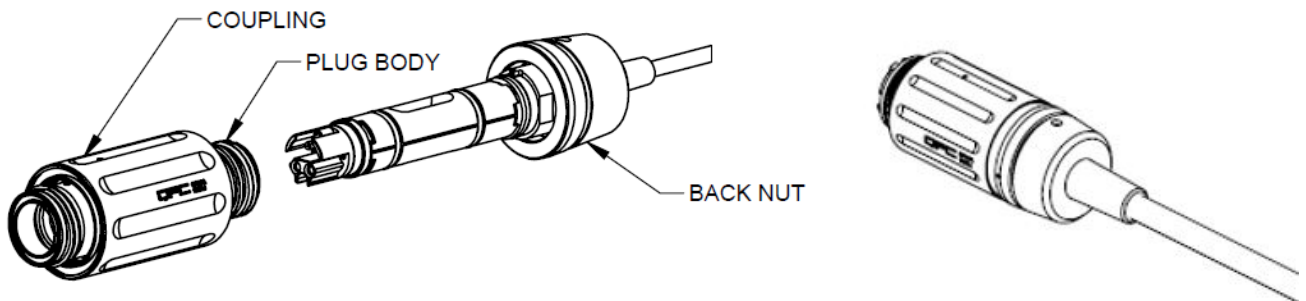
Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell.

Slide the Bend Limiter & Washer forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly.

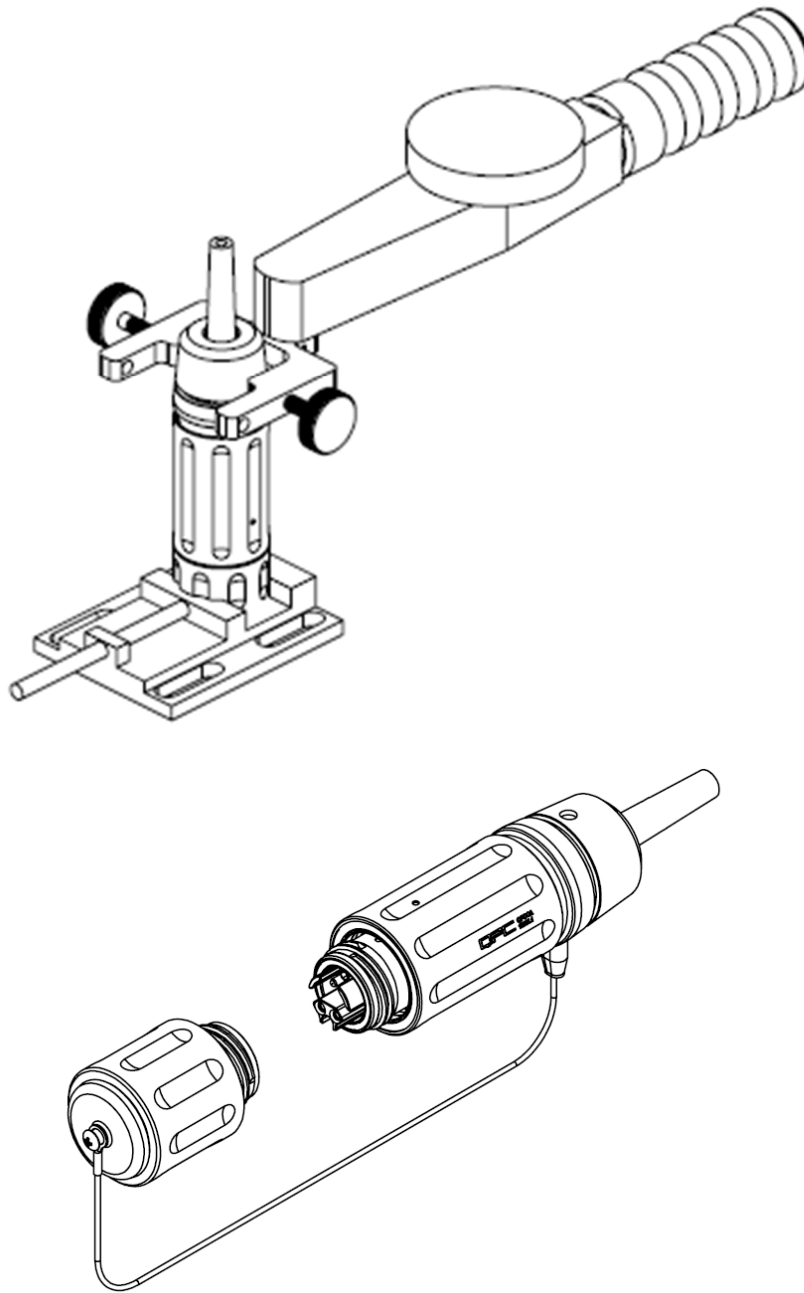


Screw on the QFoca Torque Fixture PT-466 onto the QFoca Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QFoca Cable Assembly can be unscrewed when done torquing. Place the QFoca plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 4-channel assembly, use the threaded holes to the narrow section of the C-Jaw Tool.

CAI-QFOCA: QFoca Customer Assembly Instructions

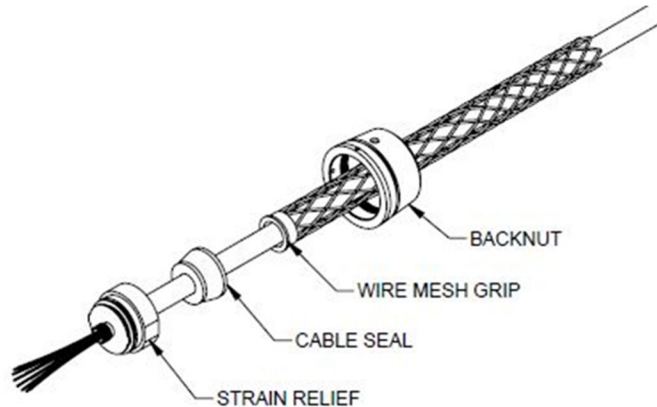
Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QFoca Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Reference Image below.



PLUG, 4 CHANNEL, STRAIGHT BACKSHELL, MESH GRIP (G1)

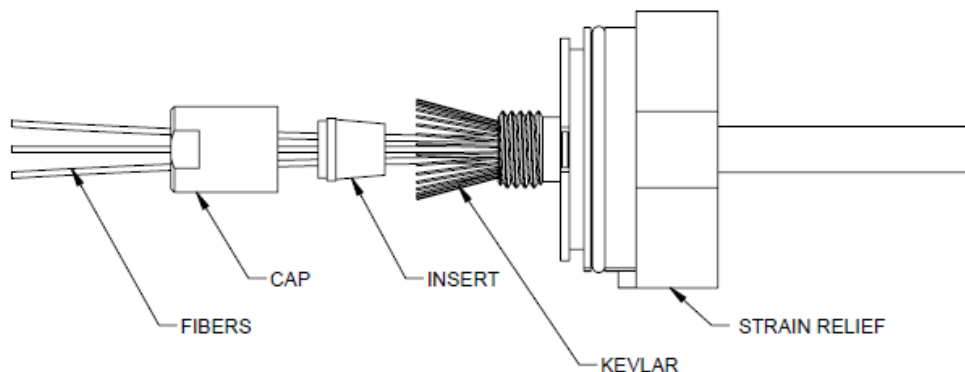
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to torque to the values in the Torque Table found in the Appendix.

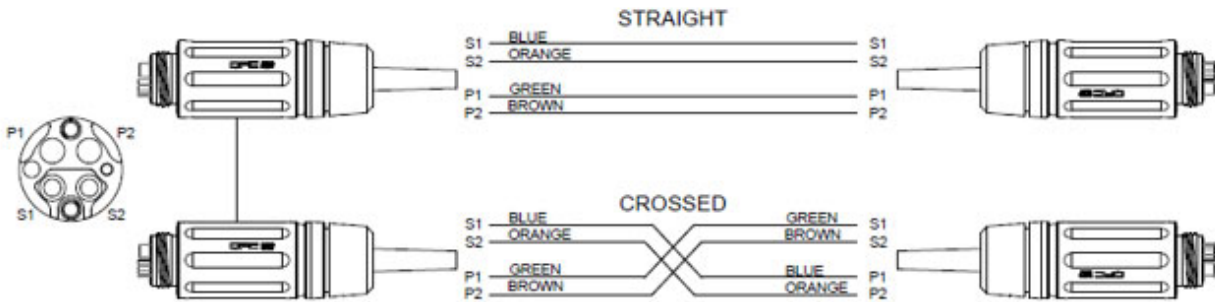


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

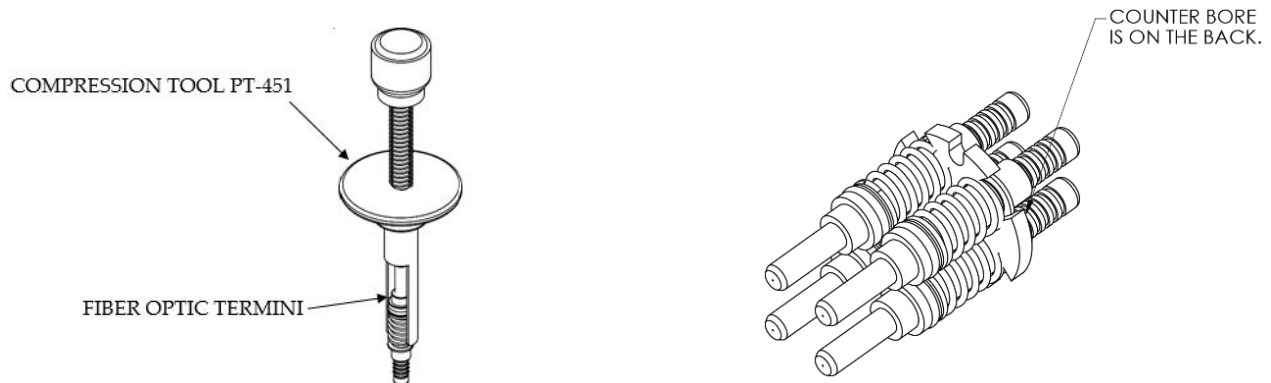
POPULATE INSERT

Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plat. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

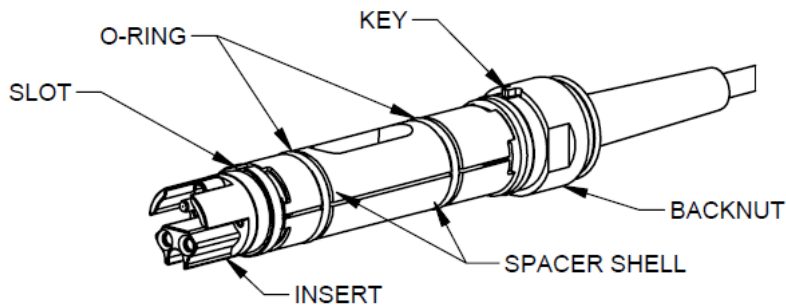


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1 & S2.

CONNECTOR ASSEMBLY

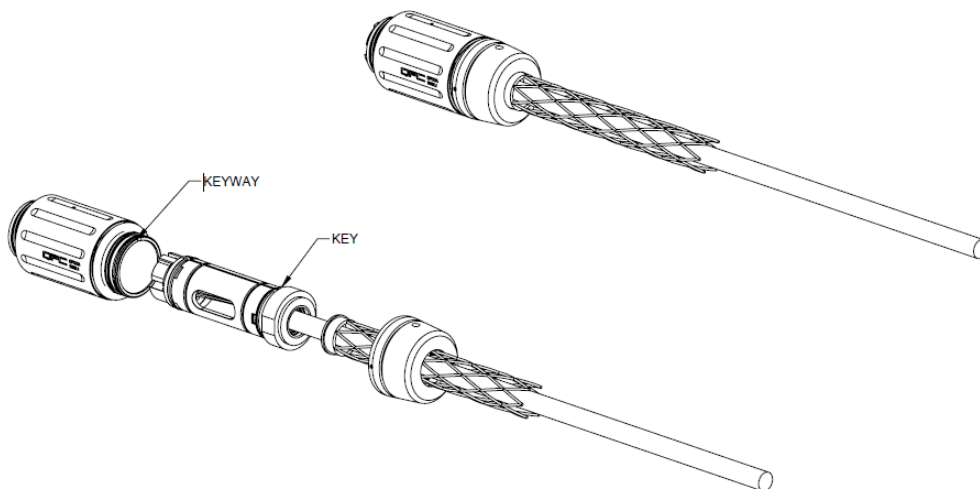
Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell.

Slide the Cable Seal & Mesh Grip forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly.

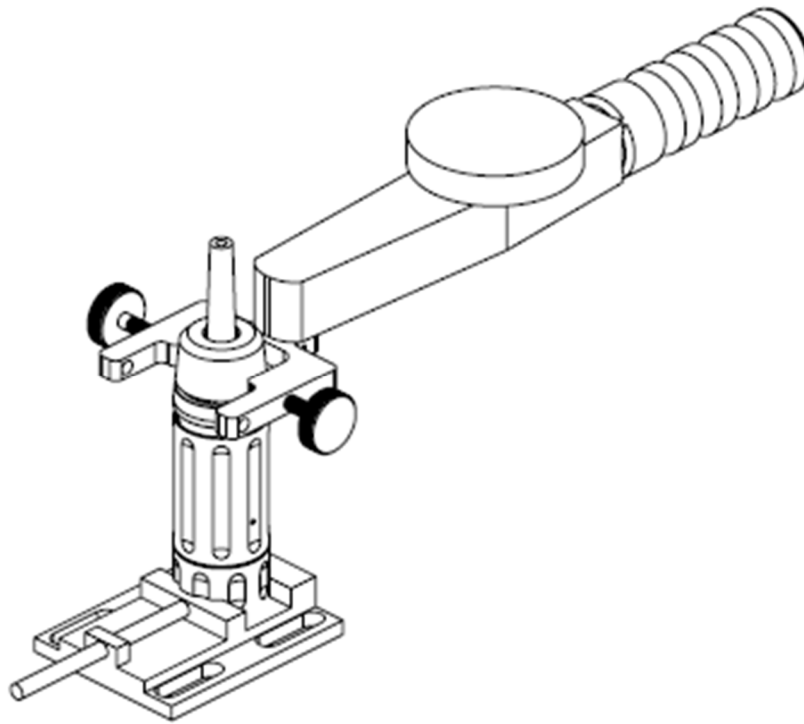


Screw on the QFoca Torque Fixture PT-466 onto the QFoca Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QFoca Cable Assembly can be unscrewed when done torquing. Place the QFoca plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 4-channel assembly, use the threaded holes to the narrow section of the C-Jaw Tool.

CAI-QFOCA: QFoca Customer Assembly Instructions

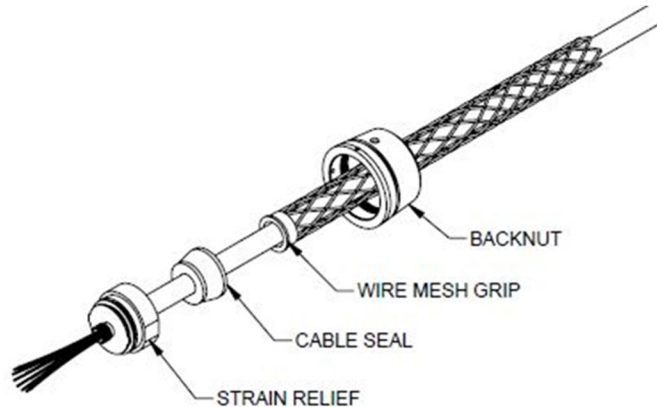
Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QFoca Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Reference image below.



PLUG, 6 CHANNEL (EZ), STRAIGHT BACKSHELL, MESH GRIP (G1)

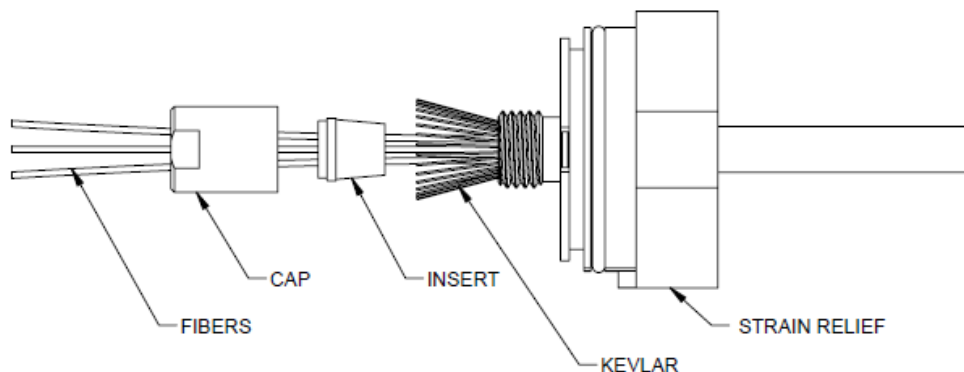
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to torque to the values in the Torque Table found in the Appendix.

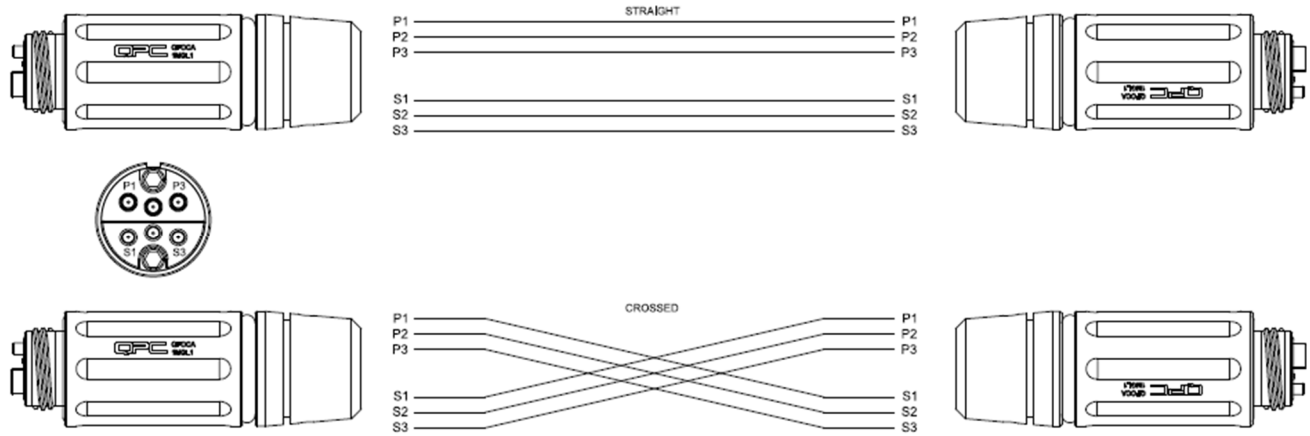


TERMINATION

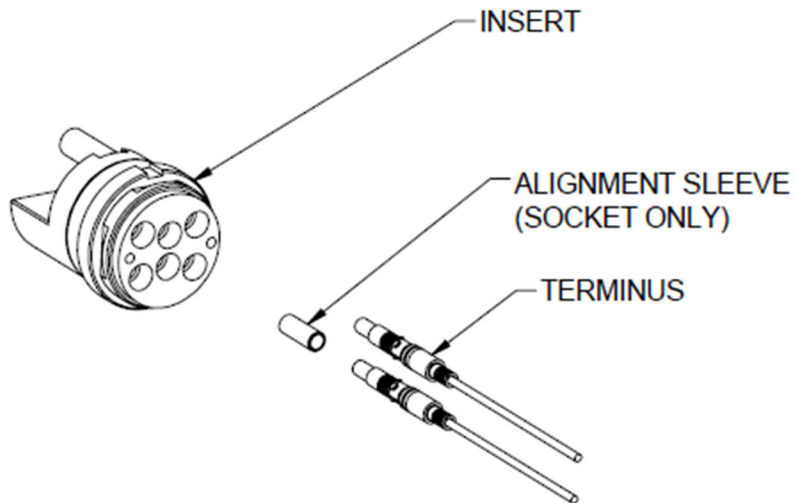
Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



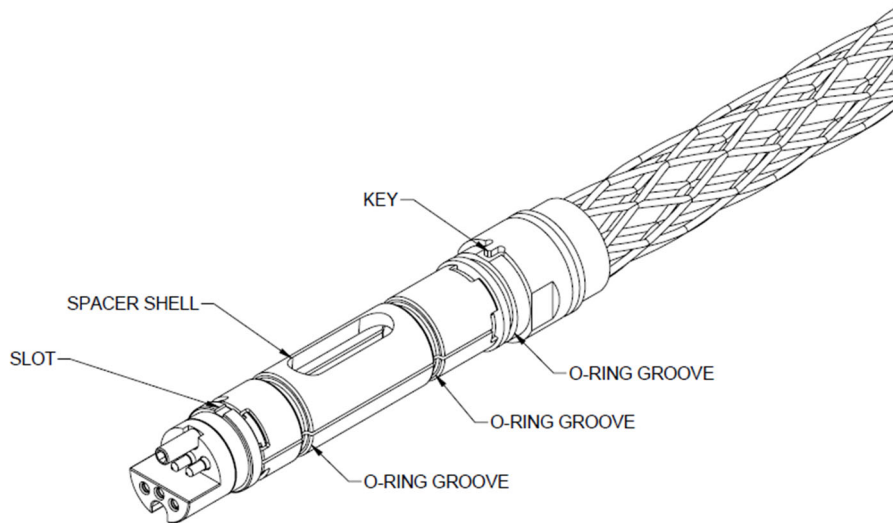
Slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1, S2, & S3. Use the Fiber Optic Termini Insertion Tool, PT-001-0900, to install each Fiber Optic Termini into its assigned cavity from the rear of the insert.



CONNECTOR ASSEMBLY

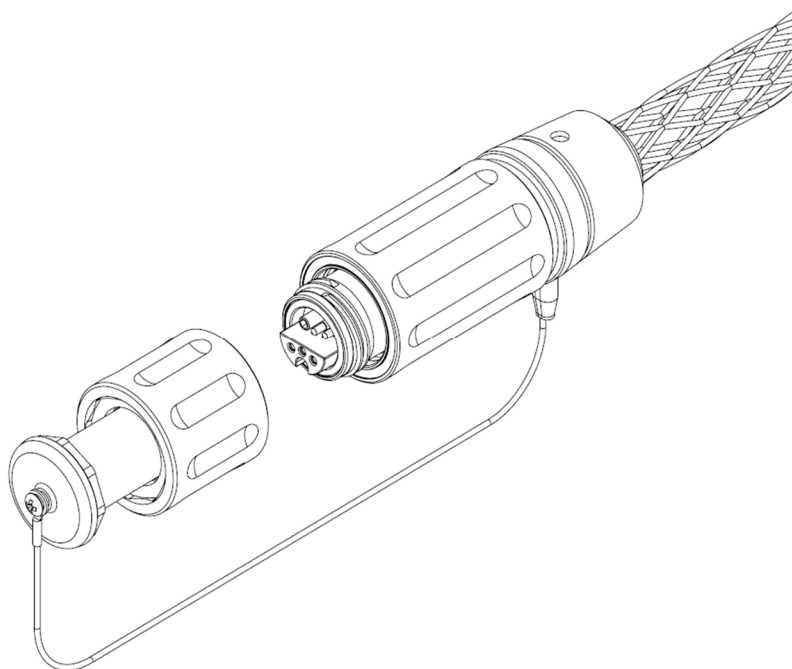
Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude ¼ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell.

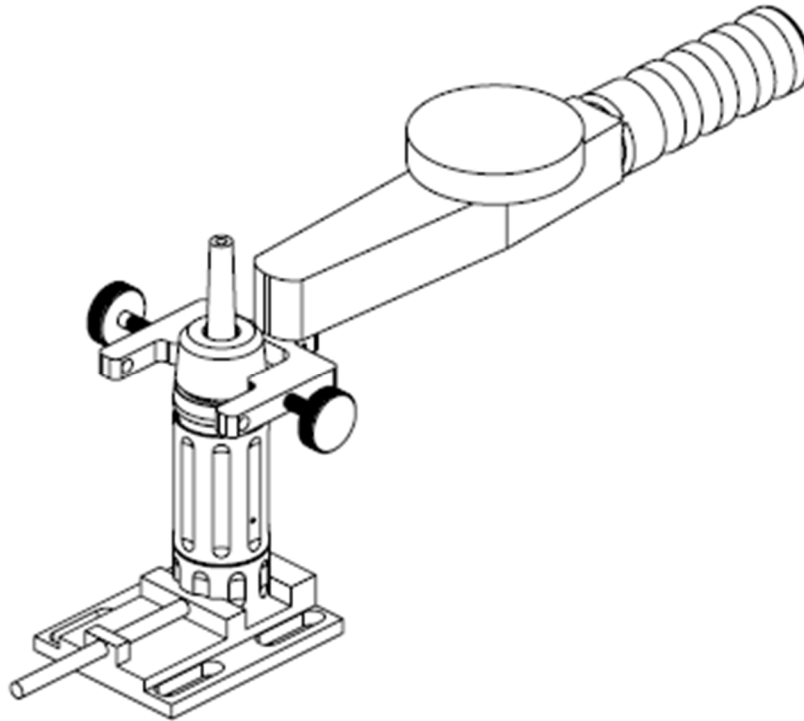
Slide the Cable Seal & Mesh Grip forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly.



CAI-QFOCA: QFoca Customer Assembly Instructions

Screw on the QFoca Torque Fixture PT-466 onto the QFoca Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QFoca Cable Assembly can be unscrewed when done torquing. Place the QFoca plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

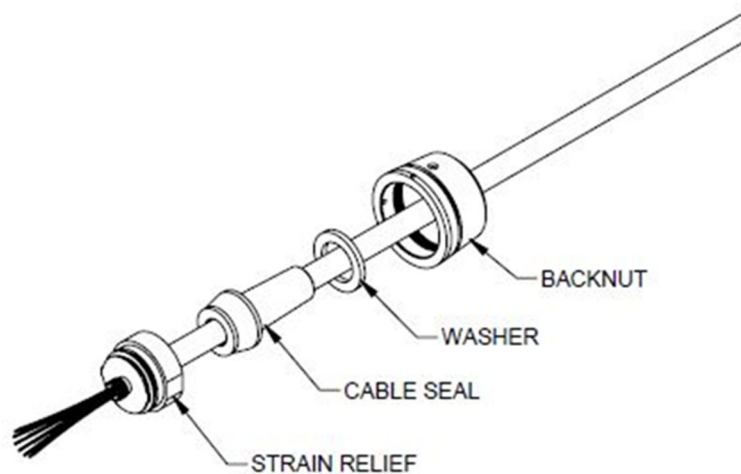
Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 4-channel assembly, use the threaded holes to the narrow section of the C-Jaw Tool. Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QFoca Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Reference image below.



PLUG, 12 CHANNEL, STRAIGHT BACKSHELL, BOOT

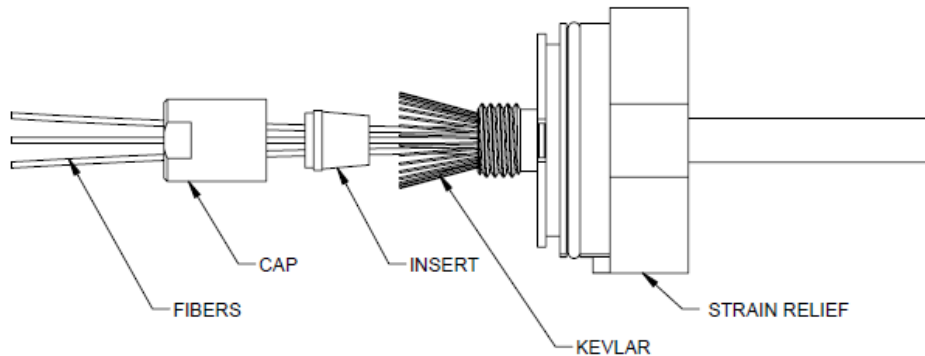
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.

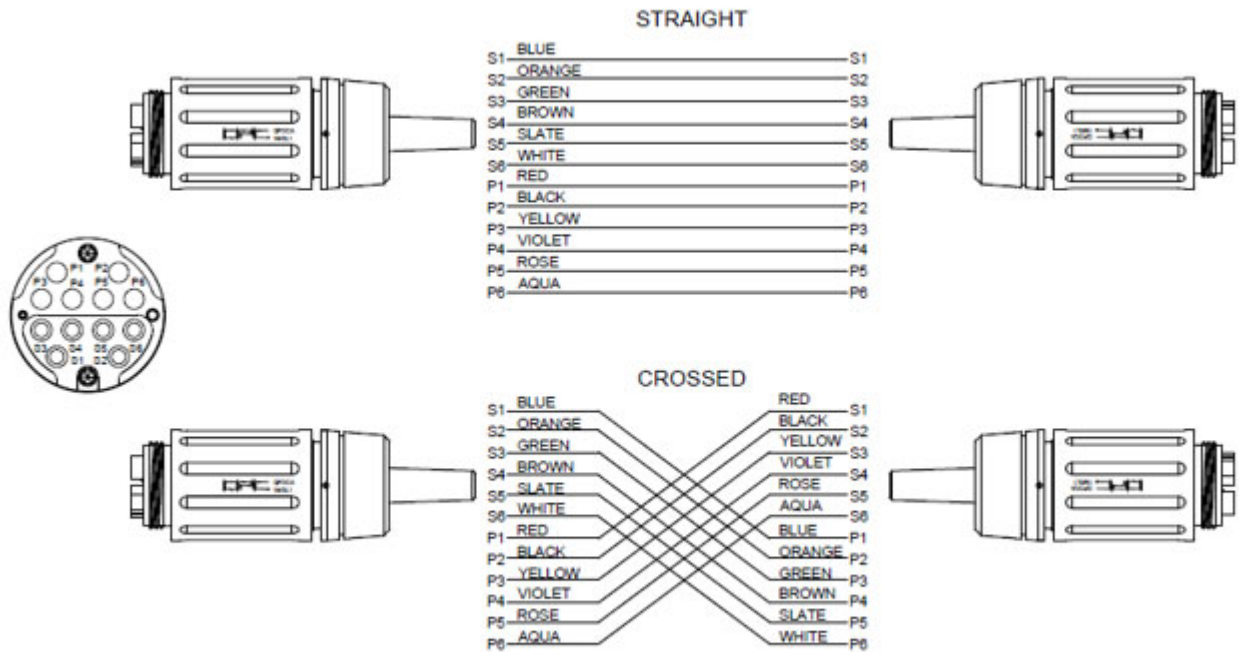


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate halves for the 12-channel. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

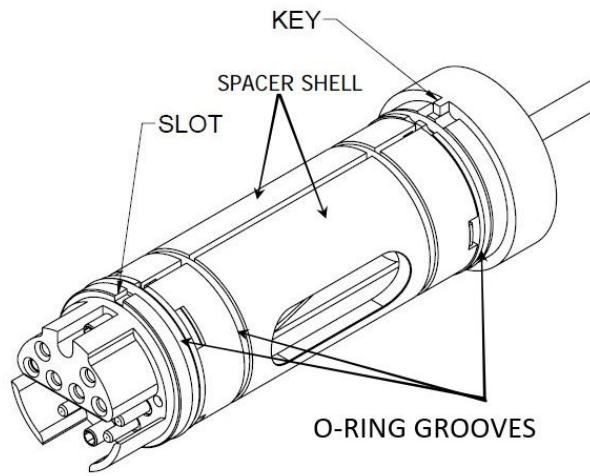


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S6.

CONNECTOR ASSEMBLY

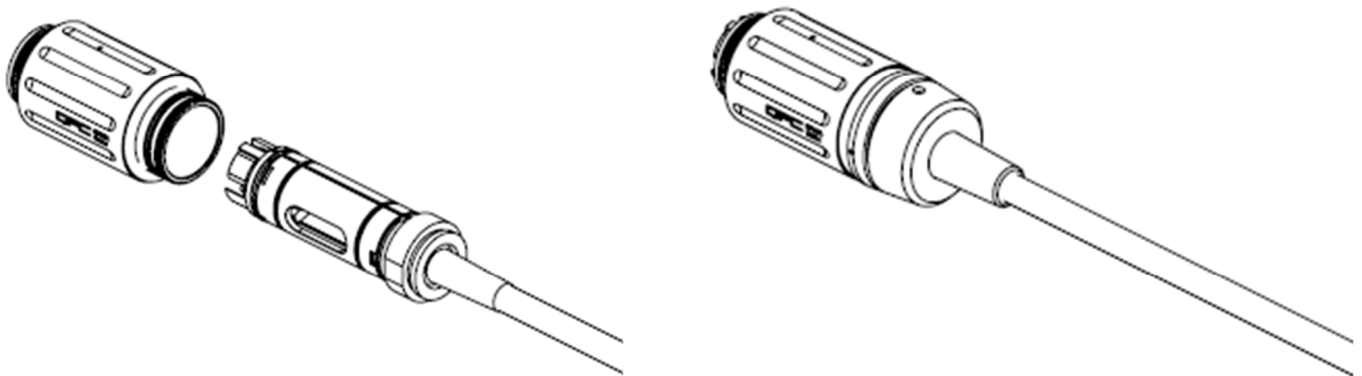
Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell.

Slide the Bend Limiter & Washer forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly.

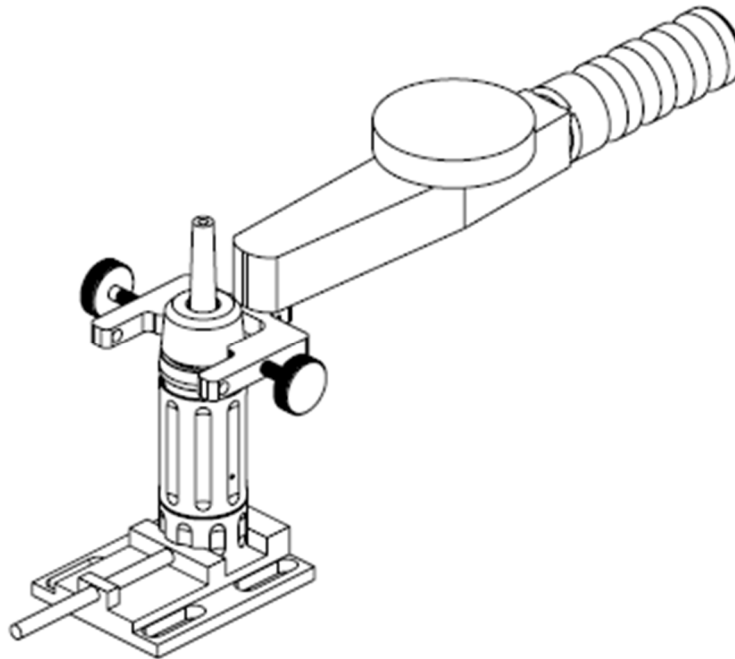


CAI-QFOCA: QFoca Customer Assembly Instructions

Screw on the QFoca Torque Fixture PT-467 onto the QFoca Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QFoca Cable Assembly can be unscrewed when done torquing. Place the QFoca plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 12-channel assembly, use the threaded holes to the wider section of the C-Jaw Tool.

Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QFoca Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Reference image below.

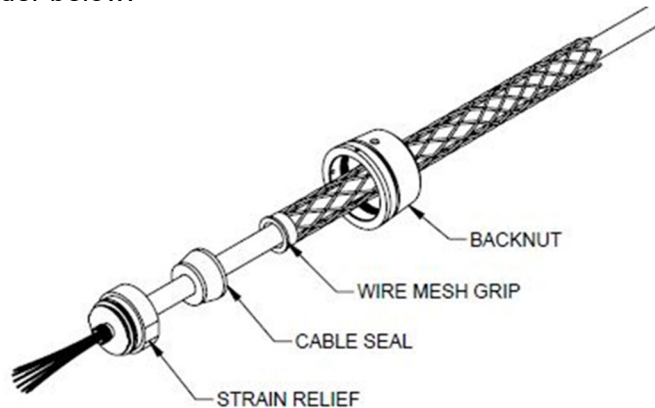


Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.

PLUG, 12 CHANNEL, STRAIGHT BACKSHELL, MESH GRIP (G1)

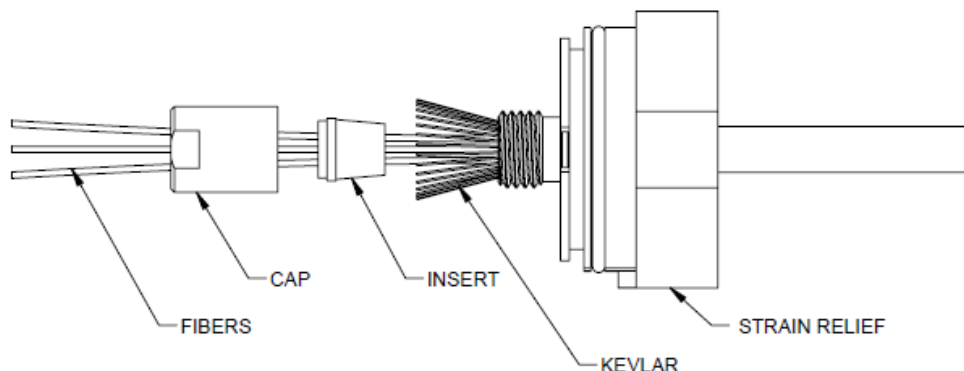
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.

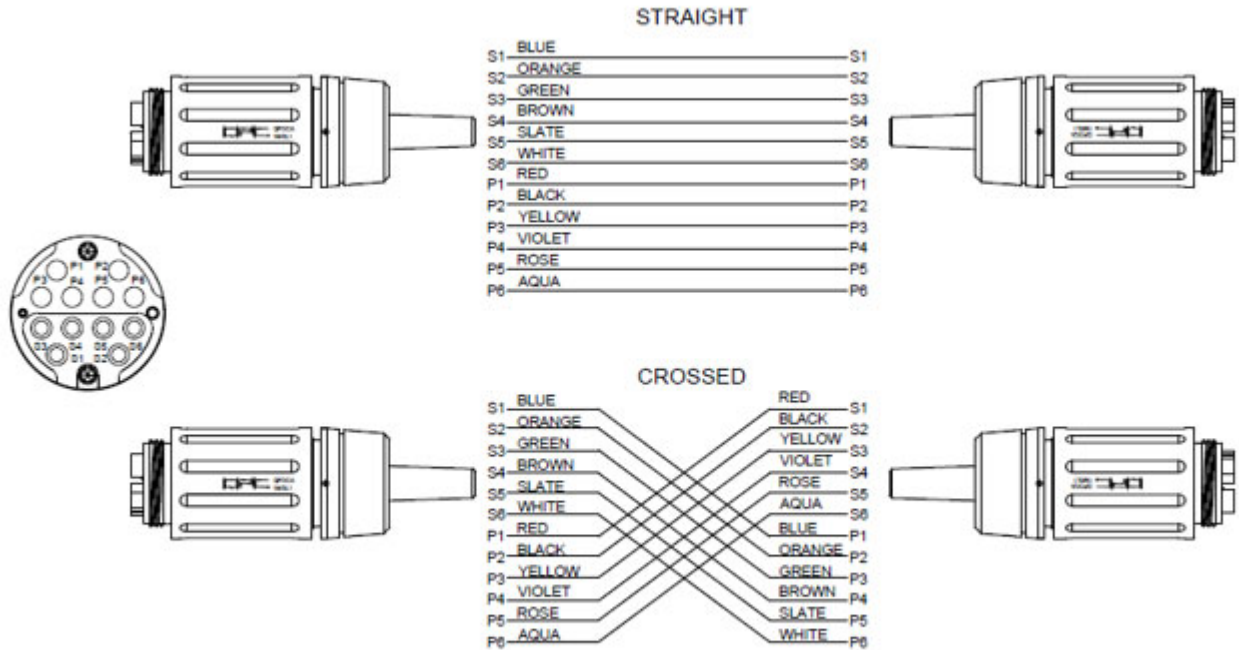


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

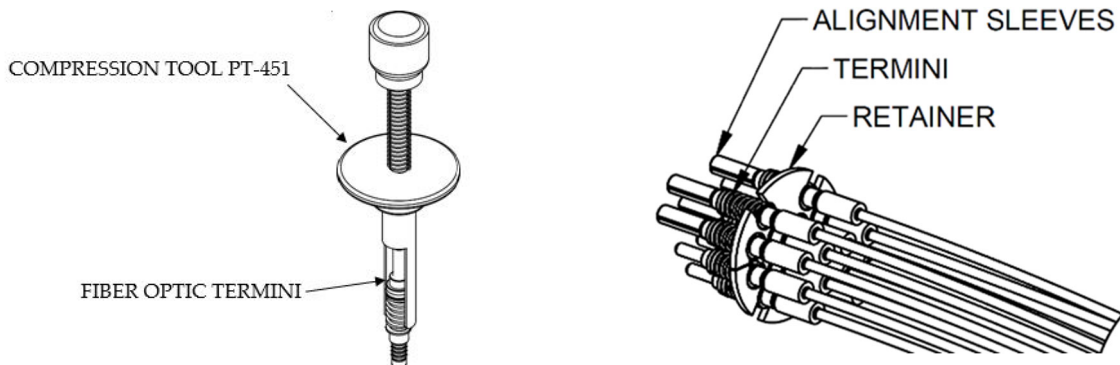
POPULATE INSERT

Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate halves for the 12-channel. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

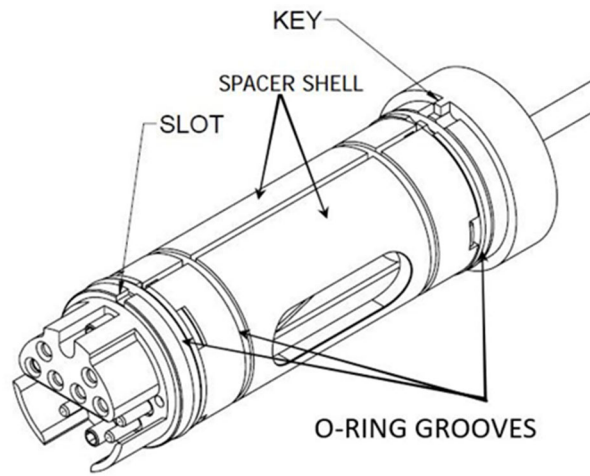


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S6.

CONNECTOR ASSEMBLY

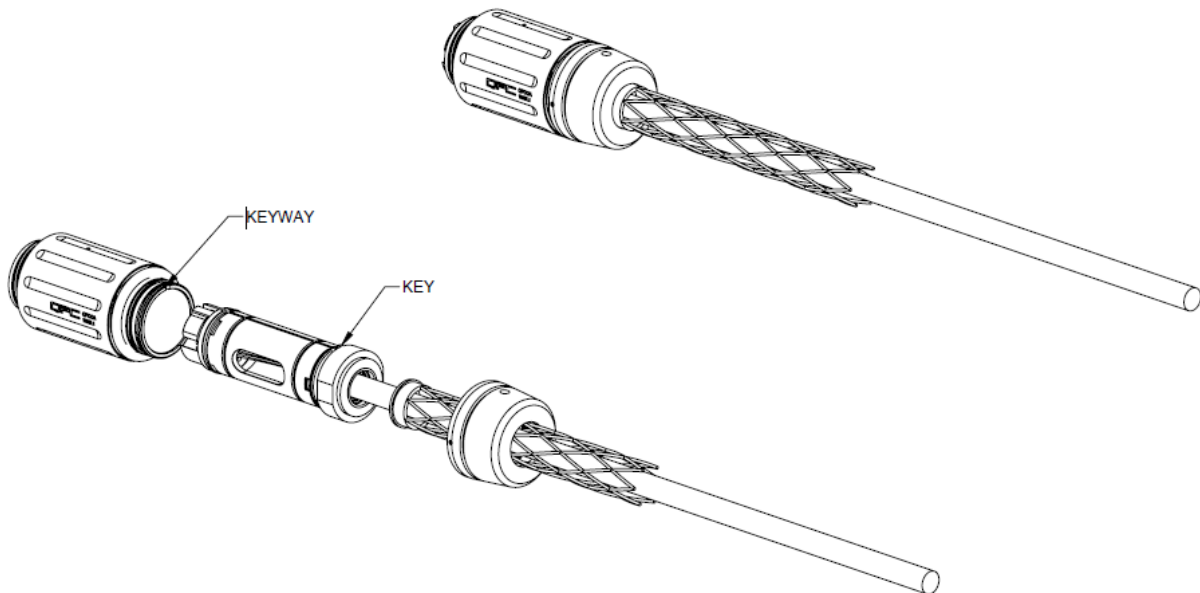
Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell.

Slide the Cable Seal & Mesh Grip forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and hand-tighten.

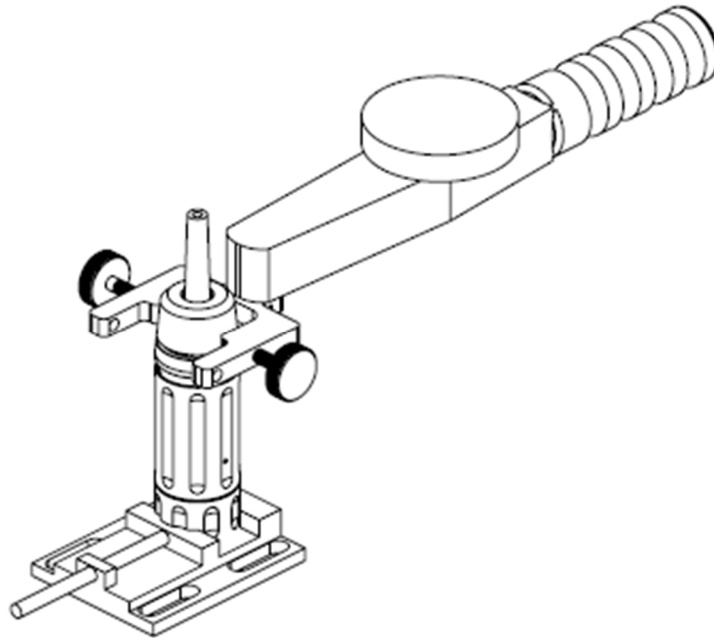


CAI-QFOCA: QFoca Customer Assembly Instructions

Screw on the QFoca Torque Fixture PT-467 onto the QFoca Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QFoca Cable Assembly can be unscrewed when done torquing. Place the QFoca plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 12-channel assembly, use the threaded holes to the wider section of the C-Jaw Tool.

Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QFoca Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Reference Image below.

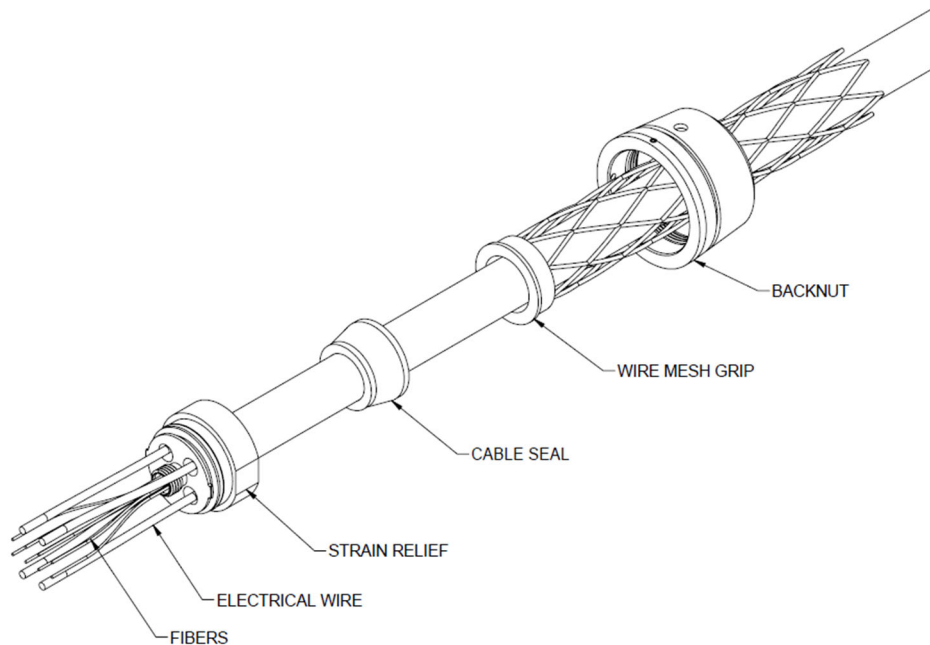


Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.

PLUG, 12 CHANNEL QDRIVE, STRAIGHT BACKSHELL, MESH GRIP (G1)

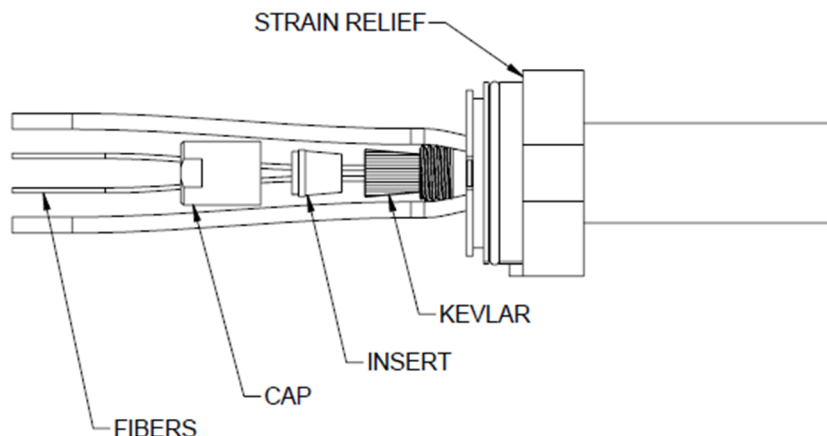
CABLE PREPARATION

Slide parts onto cable in the order below ensuring the Electrical wires slide through the four holes in the Strain Relief.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.

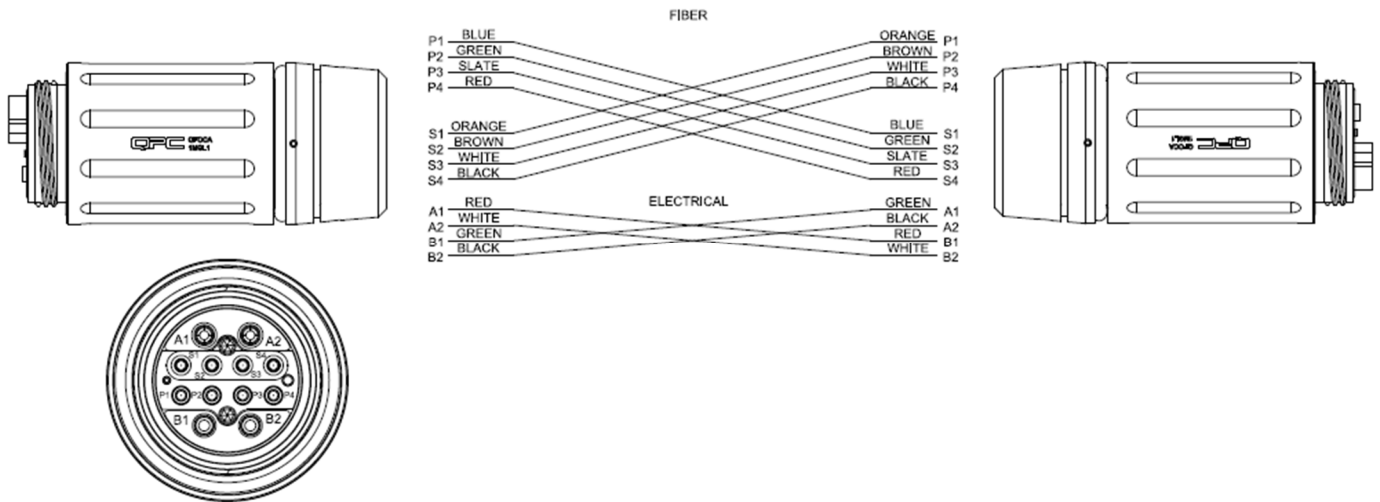


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber. Crimp the wire contacts using Adjustable Hand Crimp Tool Size 12, PT-561, with Single Position Head Size 12 Turret, PT-563.

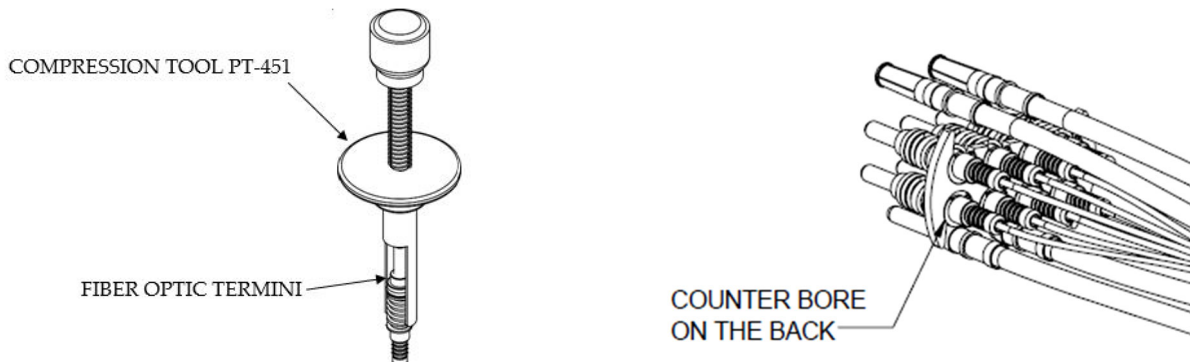
POPULATE INSERT

Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate halves for the 12-channel. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

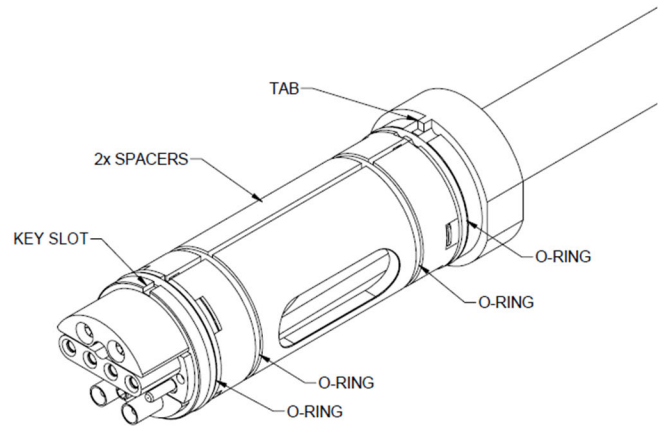
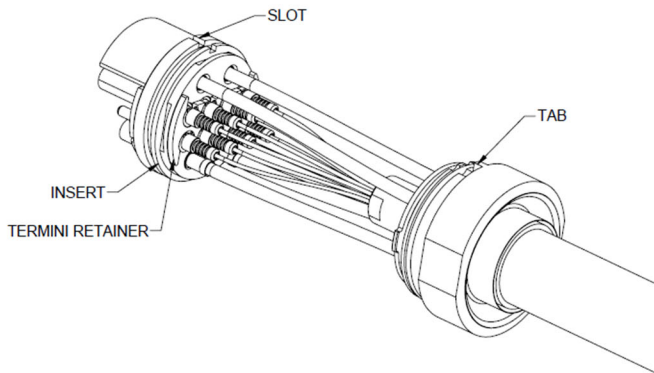


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S4.

CONNECTOR ASSEMBLY

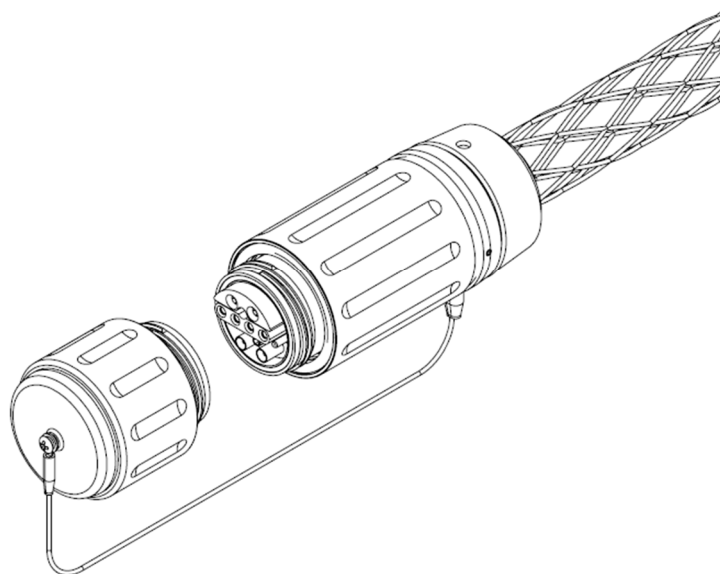
Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities. Slide the Contact Termini into the designated Insert cavities for Electrical Wire Contacts.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QDrive Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the key slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell.

Slide the Cable Seal & Mesh Grip forward. Slide the Back Nut forward to the back of the Strain Relief & QDrive Subassembly and hand-tighten.

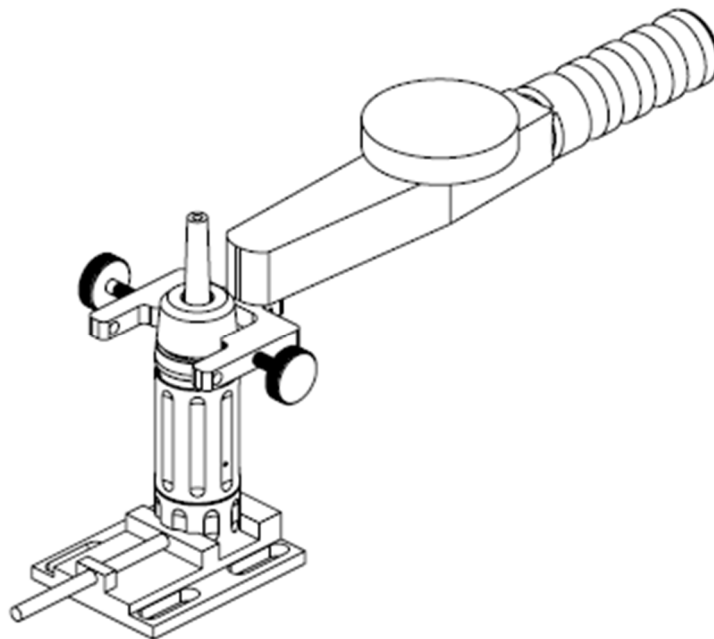


CAI-QFOCA: QFoca Customer Assembly Instructions

Screw on the QFoca Torque Fixture PT-467 onto the QDrive Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QDrive Cable Assembly can be unscrewed when done torquing. Place the QDrive plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 12-channel assembly, use the threaded holes to the wider section of the C-Jaw Tool.

Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QDrive Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Reference Image below.

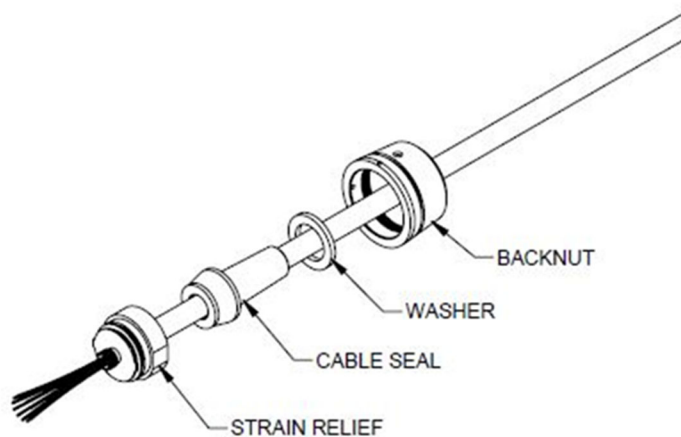


Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.

PLUG, 24 CHANNEL, STRAIGHT BACKSHELL, BOOT

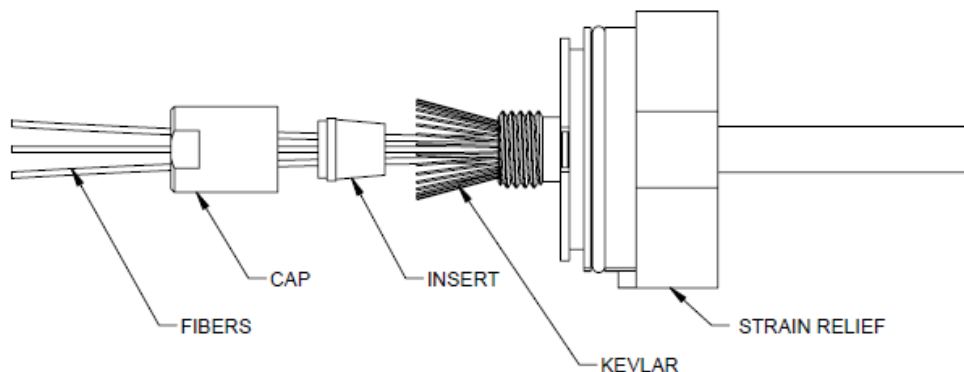
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.

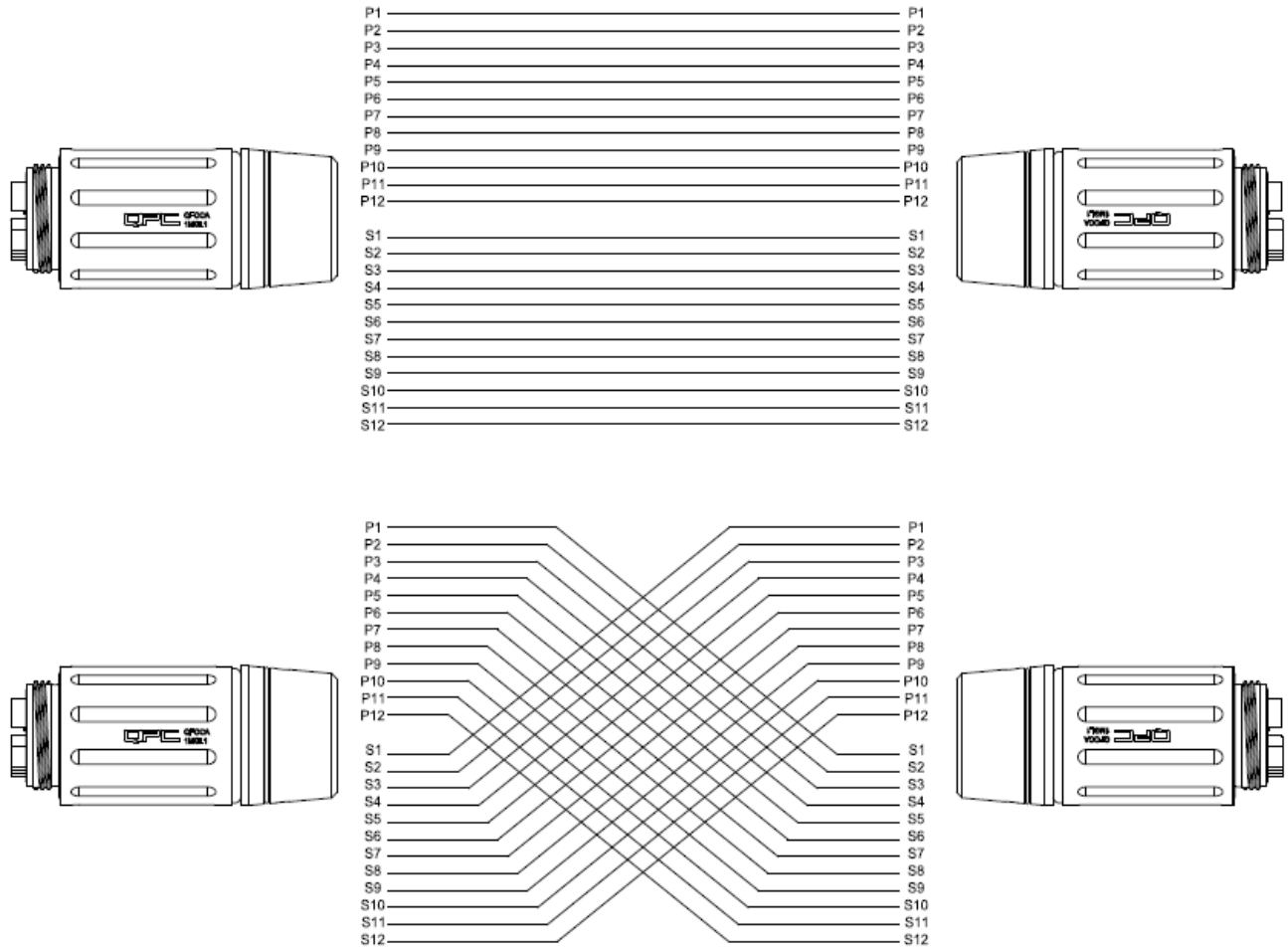


TERMINATION

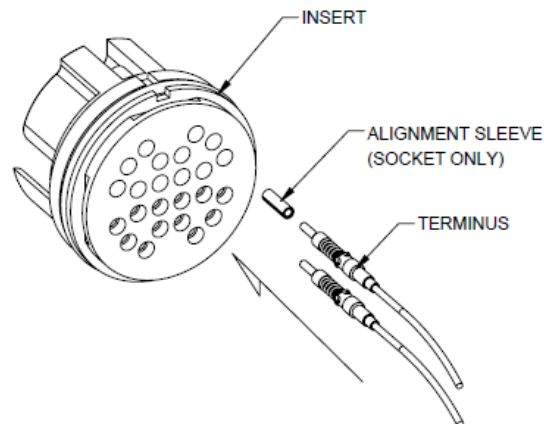
Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

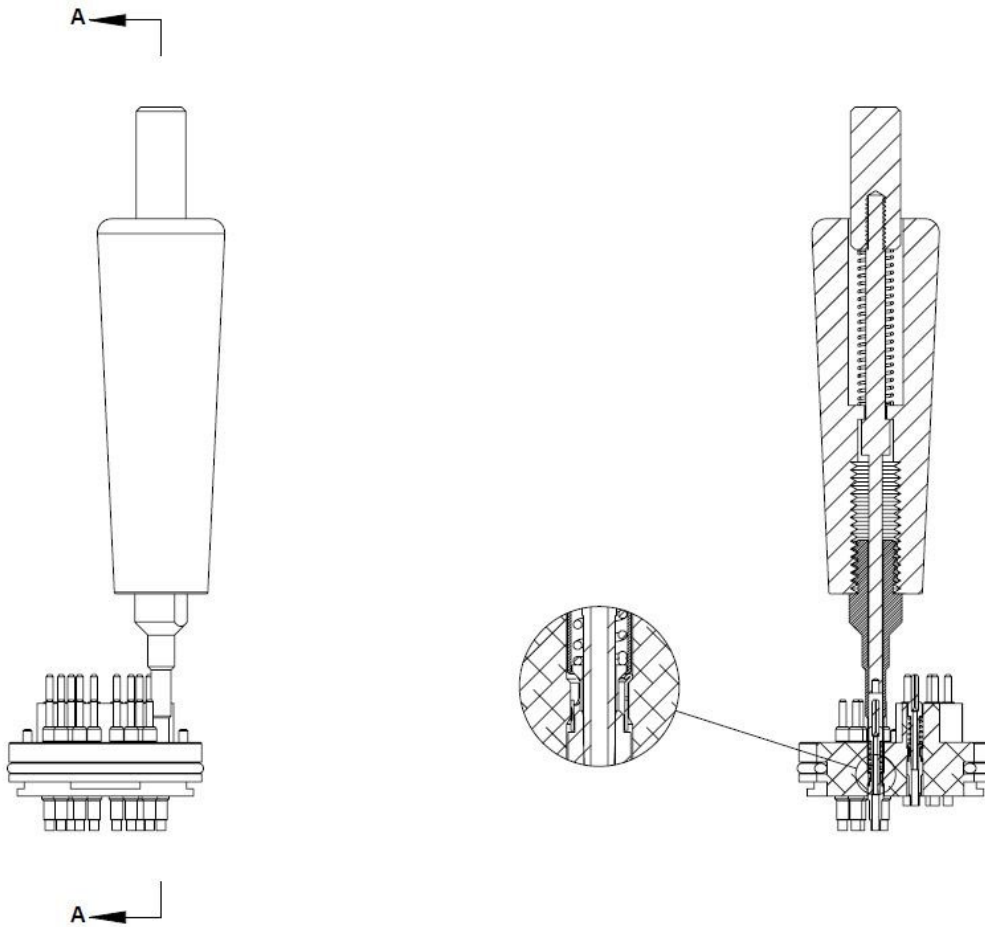
Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



Slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S12. Use the Fiber Optic Termini Insertion Tool, PT-001-0900, to populate the Insert with the Termini Pins & Sockets.



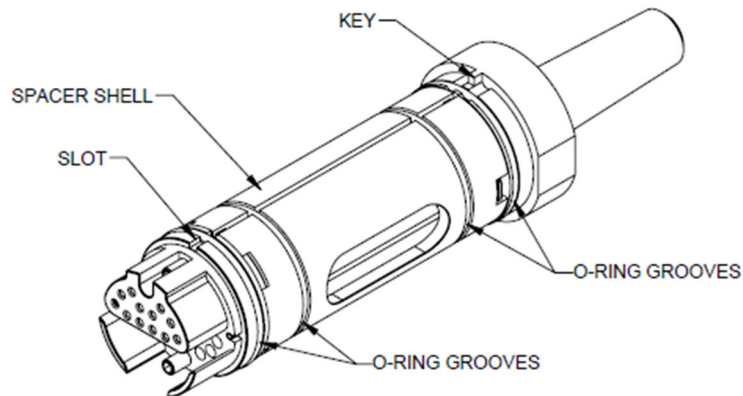
If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to unscrew the Socket Head Cap Screws on the front of the Cap Sleeve Retainer to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini from the front until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to screw in the Cap Sleeve Retainer. Torque screws to the values in the Torque Table found in the Appendix.



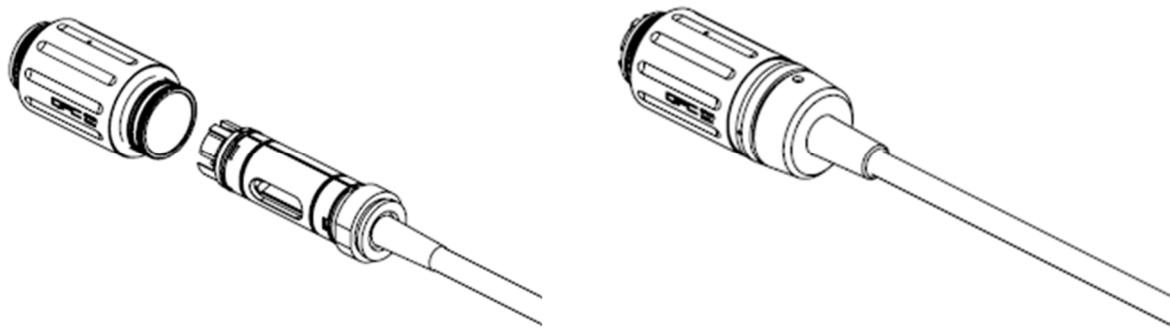
CONNECTOR ASSEMBLY

Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Bend Limiter & Washer forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and hand-tighten.

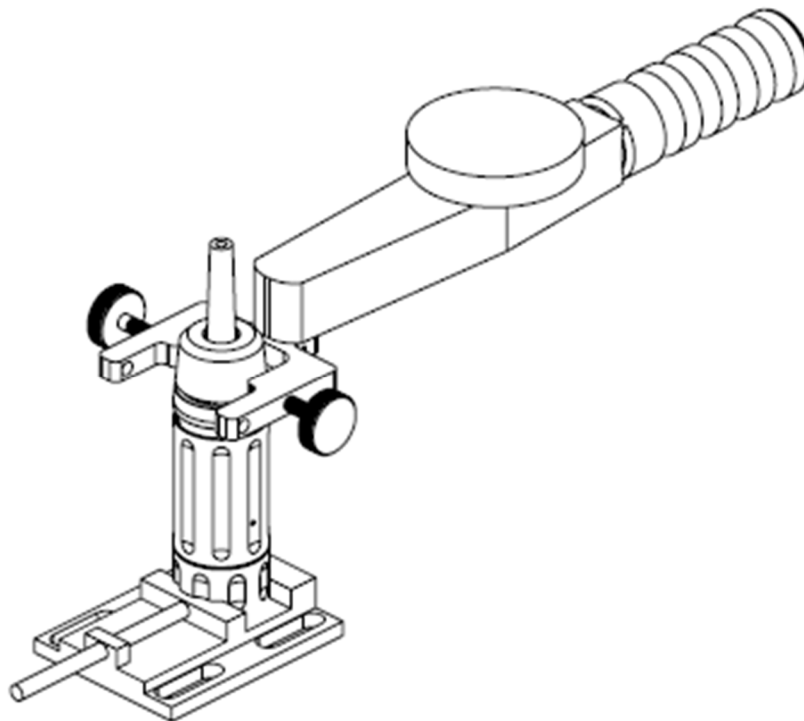


Screw on the QFoca Torque Fixture PT-467 onto the QFoca Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QFoca Cable Assembly can be unscrewed when done torquing. Place the QFoca plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

CAI-QFOCA: QFoca Customer Assembly Instructions

Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 12-channel assembly, use the threaded holes to the wider section of the C-Jaw Tool.

Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QFoca Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Image seen on the following page.

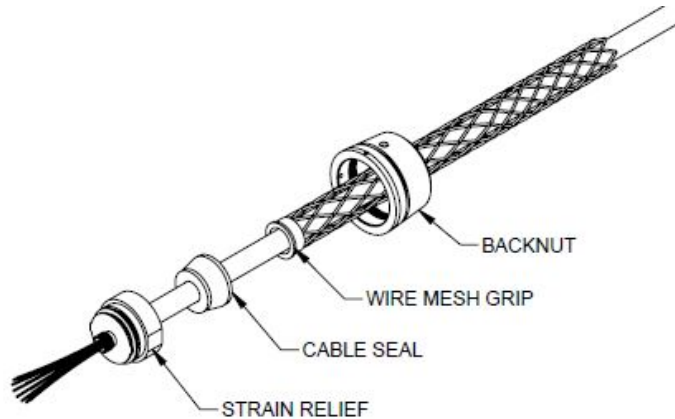


Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.

PLUG, 24 CHANNEL, STRAIGHT BACKSHELL, MESH GRIP (G1)

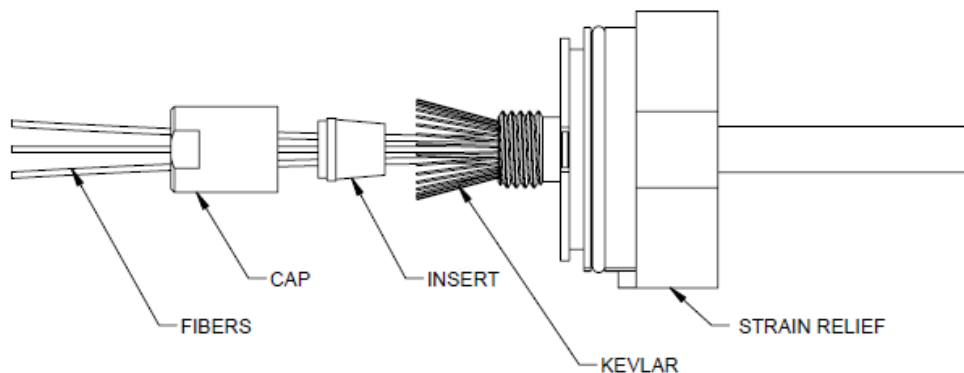
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.

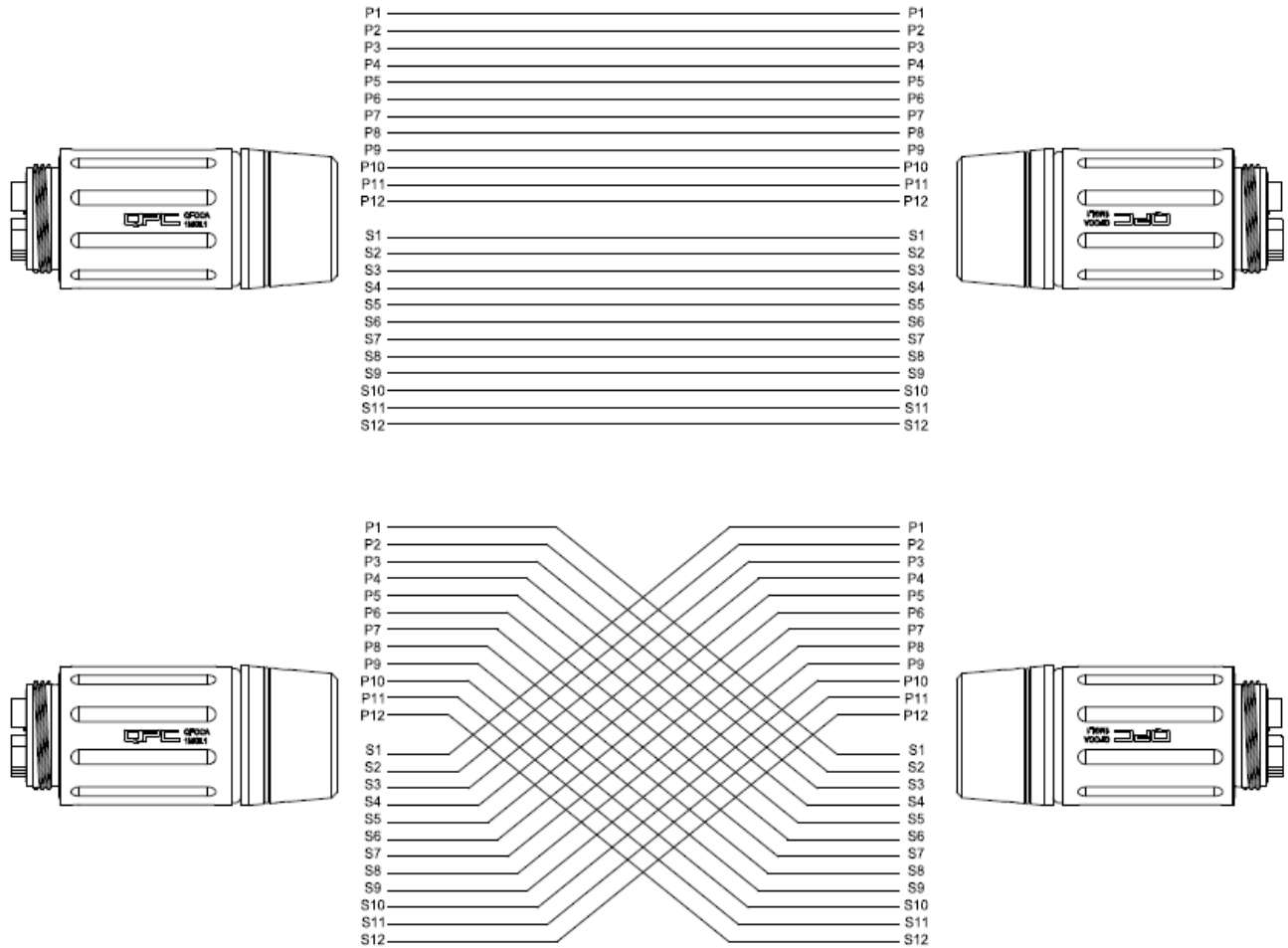


TERMINATION

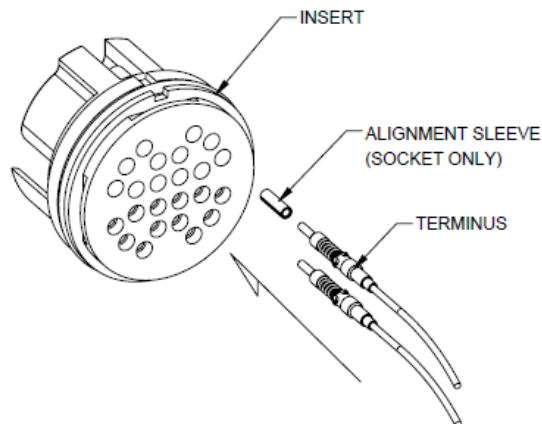
Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

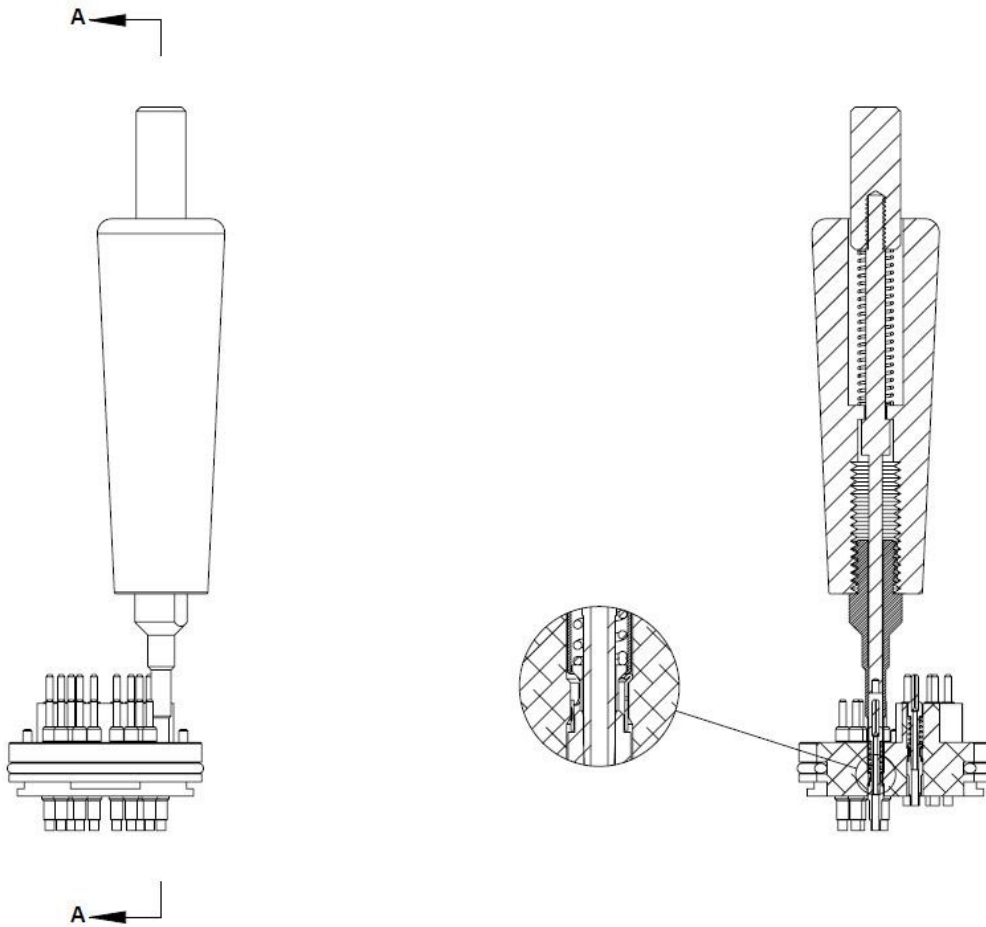
Refer to the channel layout below to orient the Fiber Optic Termini into the designated channels according to the jacket color and the desired configurations, Straight or Crossed.



Slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S12. Use the Fiber Optic Termini Insertion Tool, PT-001, to populate the Insert with the Termini Pins & Sockets.



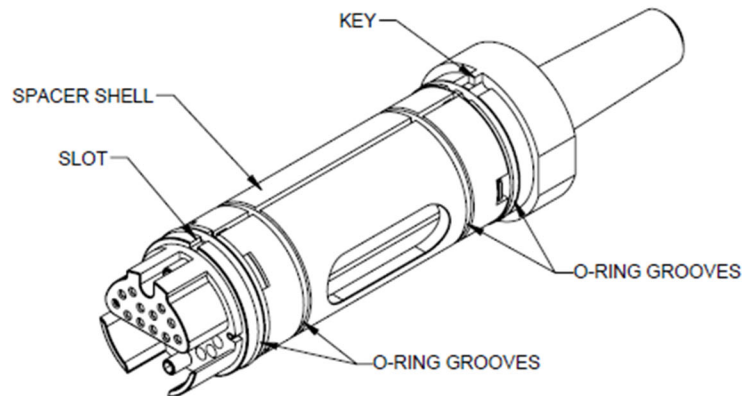
If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to unscrew the Socket Head Cap Screws on the front of the Cap Sleeve Retainer to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini from the front until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to screw in the Cap Sleeve Retainer. Torque screws to the values in the Torque Table found in the Appendix.



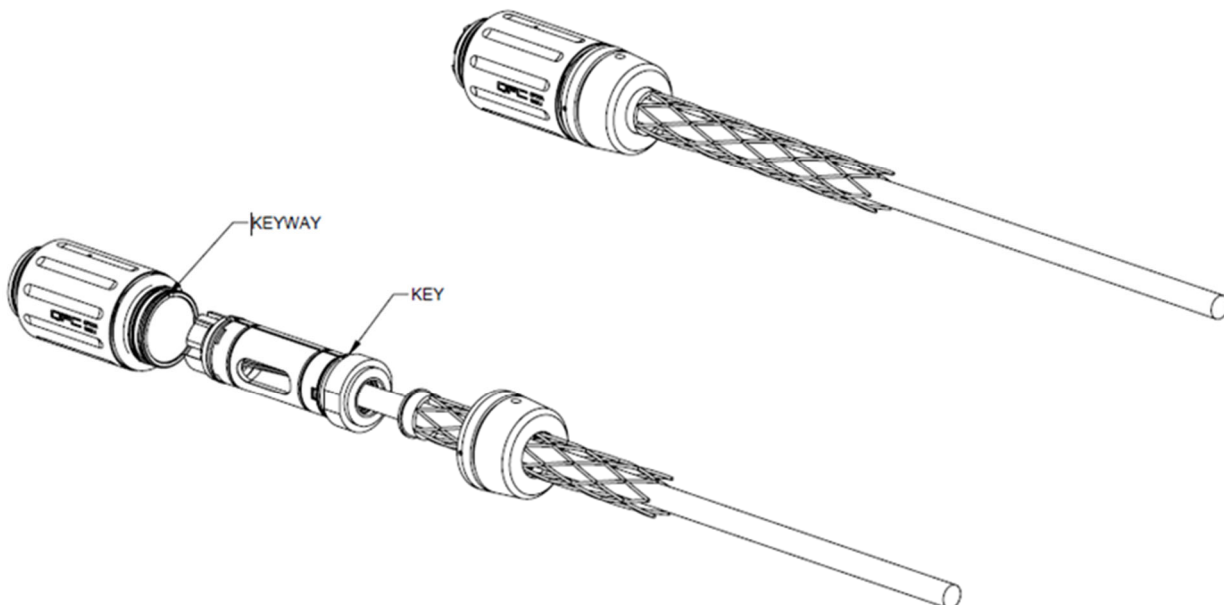
CONNECTOR ASSEMBLY

Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Plug Body ensuring that the key inside of the Plug Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Plug Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Bend Limiter & Washer forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and hand-tighten.

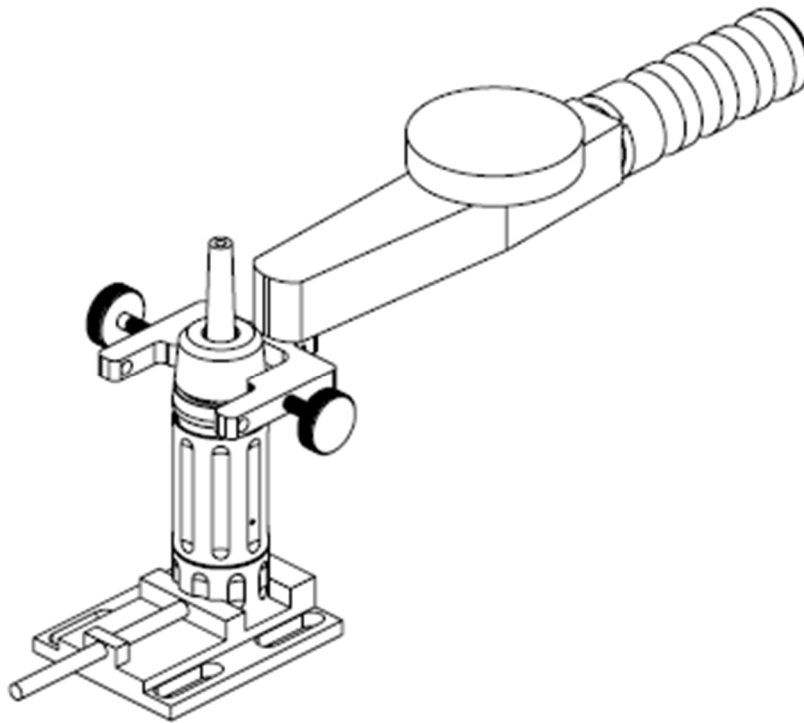


CAI-QFOCA: QFoca Customer Assembly Instructions

Screw on the QFoca Torque Fixture PT-467 onto the QFoca Cable Assembly making sure that the Teflon Washer that came with the QFoca Torque Fixture is at the bottom of the Torque Fixture Dust Cover so that the QFoca Cable Assembly can be unscrewed when done torquing. Place the QFoca plug onto the 4" Drill Press Vise PT-591 with the flats of the Torque Fixture facing down and tighten.

Insert the thumb screws into the appropriate holes of the QFoca Back Nut Tightening C-Jaw Tool PT-465. For a 4-channel assembly, use the threaded holes to the wider section of the C-Jaw Tool.

Screw in the thumb screws of the C-Jaw Tool assembly into the spanner holes on the Back Nut of the QFoca Cable Assembly, then attach the Dial-Torque Measuring Wrench PT-506 into the 3/8 inch Square hole in the C-Jaw Tool and torque Back Nut to the values in the Torque Table found in the Appendix. Reference image below.



Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.

RECEPTACLE, 4 CHANNEL, NO BACKSHELL

TERMINATION

For 900µm Cable Options

Use the Stripping Length Diagram seen below to Terminate the Fiber. For Fiber Optic Termination and Polishing details, reference CAI-TERM.

For 2mm or 3mm Cable Options

Slide the Crimp Sleeve onto the cable and strip the cable according to the lengths in the diagram seen below. Leave approximately 0.255 Inches (6.5mm) of Kevlar on the cable for crimping. Once the fiber has been inserted into the ferrule, slide the Crimp Sleeve over the Kevlar. Use Fiber Optic Termini Crimp Tool PT-005 to crimp the Crimp Sleeve into place. Reference Fiber Optic Termination and Polishing (CAI-TERM) for details.

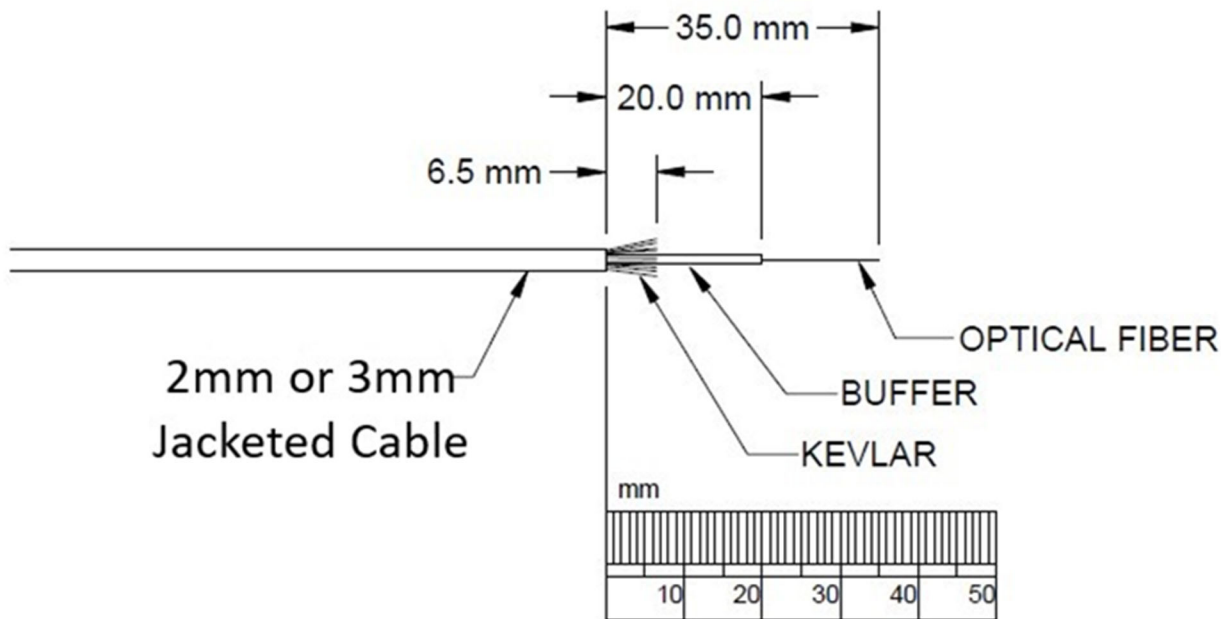
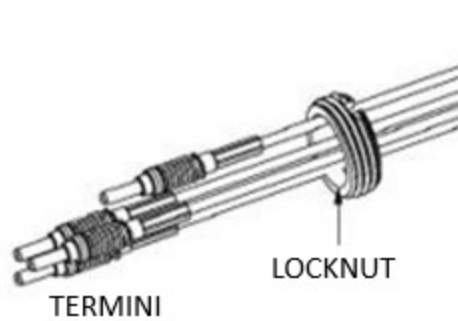


Diagram not to scale.

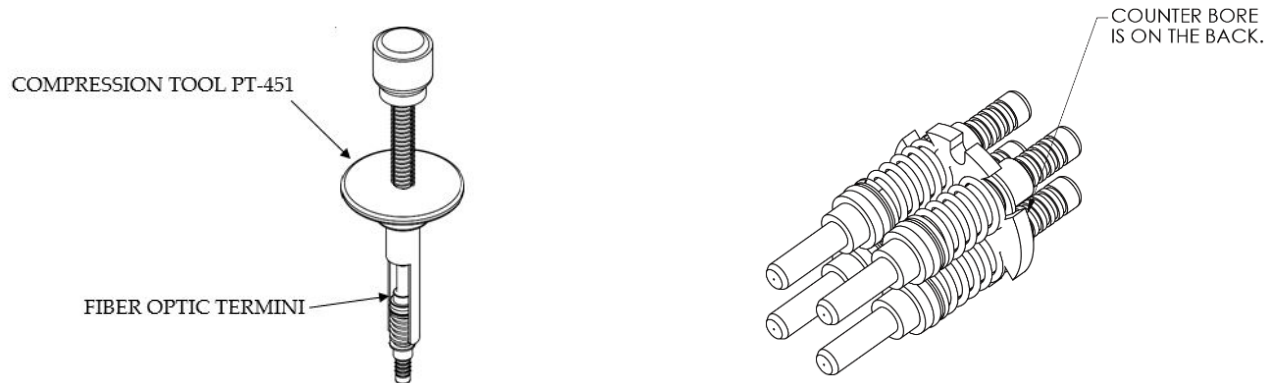
POPULATE INSERT

Slide the Locknut over the fiber.



Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate halves for the 12-channel. The Terminus clip should be resting in the Termini Retainer Plate pockets.

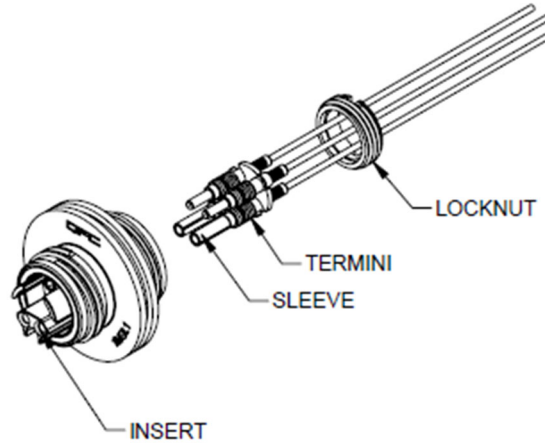
Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.



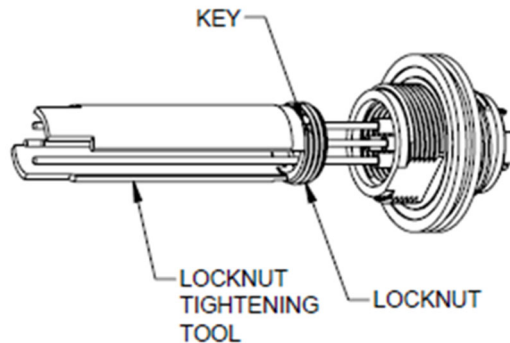
After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1 & S2.

CONNECTOR ASSEMBLY

Install Insert into the Receptacle Body. There is a slot on the Insert back that must align with the key on the inside of the Receptacle Body. Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities. When properly positioned, the Insert cap will protrude ¼ inch from the front of the Insert body.



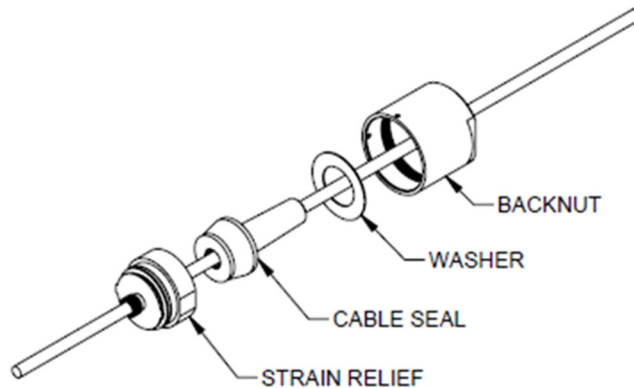
To tighten the Locknut, use the QFoca Locknut Tightening Tool, PT-145 by passing the cables through the tool slot and engaging the keys on the Tool with the keyways on the Locknut. Turn clockwise to tighten the Locknut. Torque the Locknut to the values in the Torque Table located in the Appendix using Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 by tightening the Crow's Foot Wrench onto the flats of the Locknut Tightening Tool.



RECEPTACLE, 4 CHANNEL, STRAIGHT BACKSHELL, BOOT

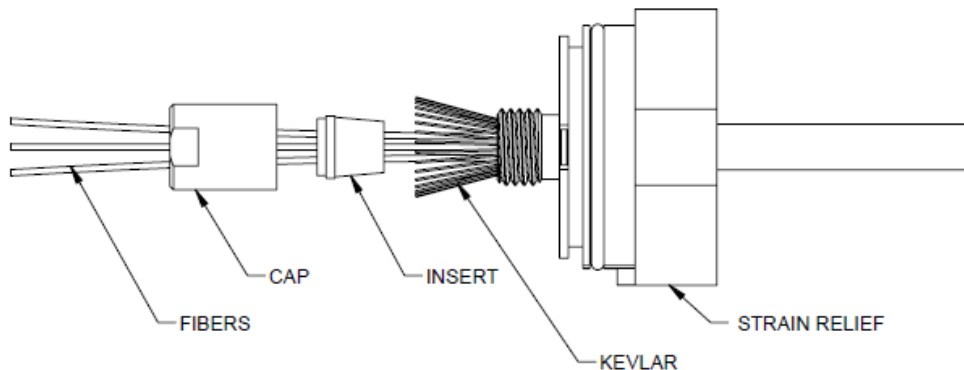
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to torque to the values in the Torque Table found in the Appendix.



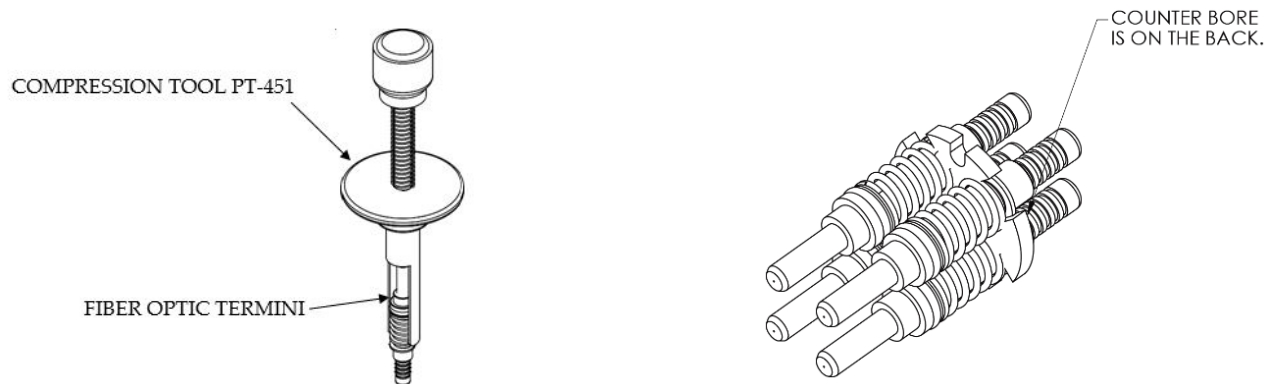
TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

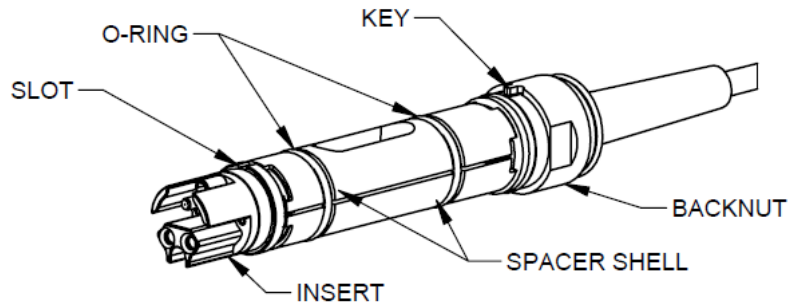


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1 & S2.

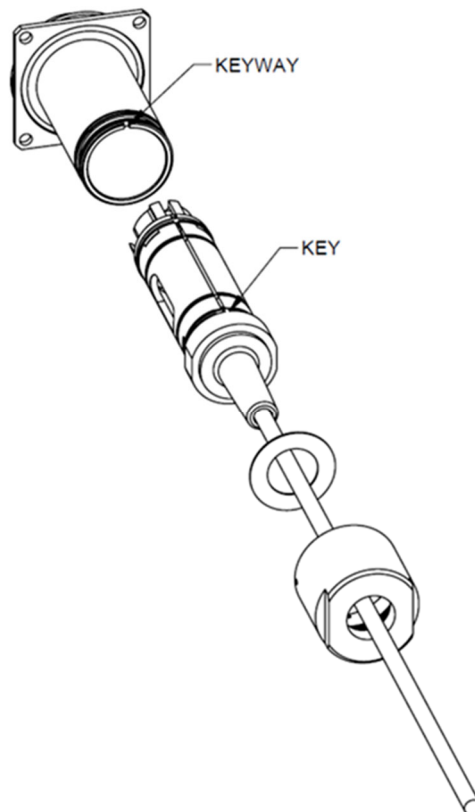
CONNECTOR ASSEMBLY

Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



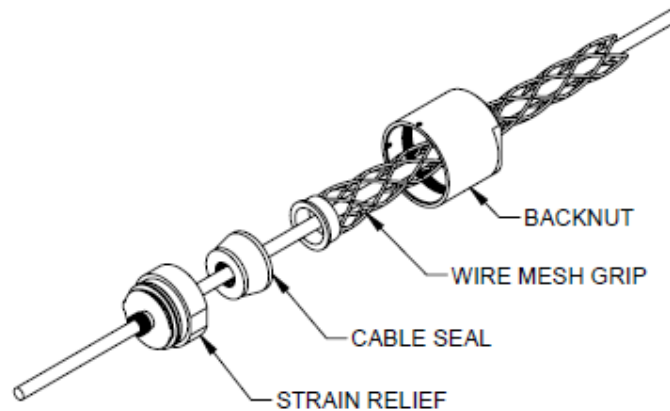
Insert the QFoca Subassembly into the Receptacle Body ensuring that the key inside of the Receptacle Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Receptacle Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Bend Limiter & Washer forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to torque to the values in the Torque Table located in the Appendix



RECEPTACLE, 4 CHANNEL, STRAIGHT BACKSHELL, MESH GRIP (G1)

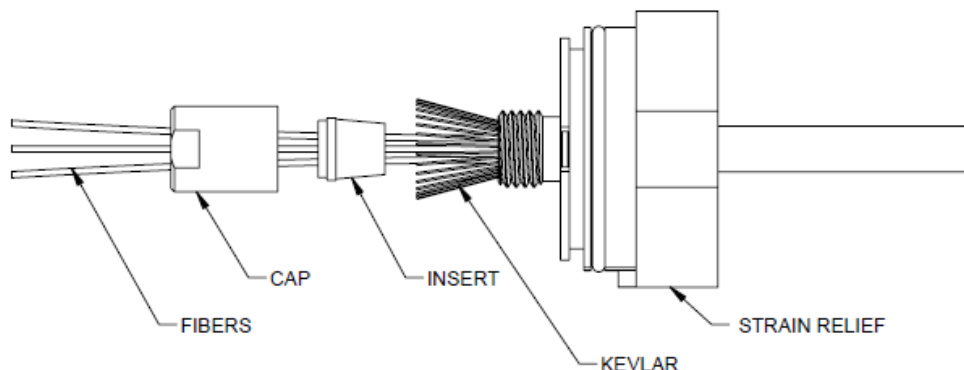
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to torque to the values in the Torque Table found in the Appendix.



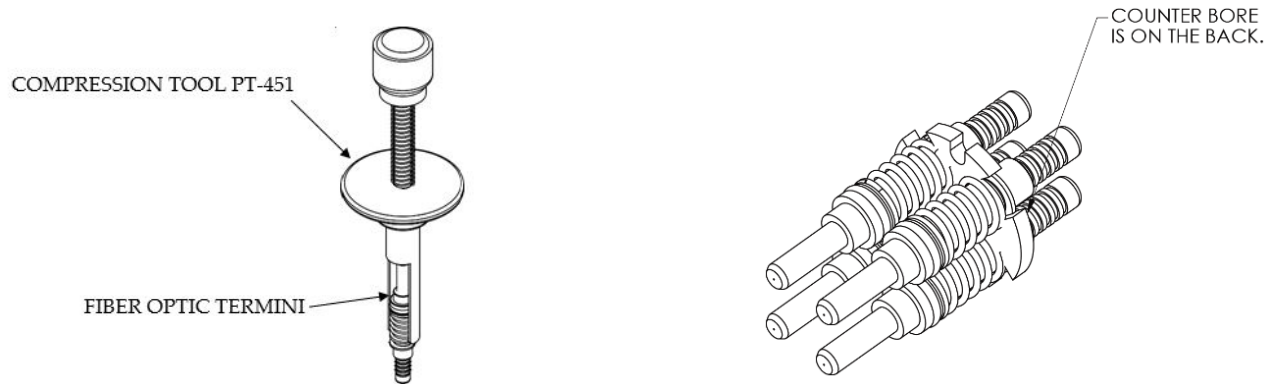
TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

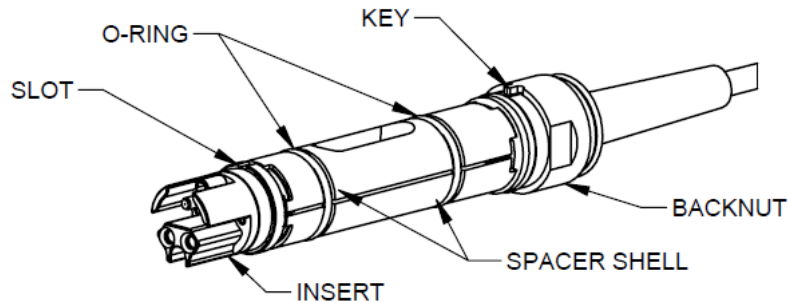


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1 & S2.

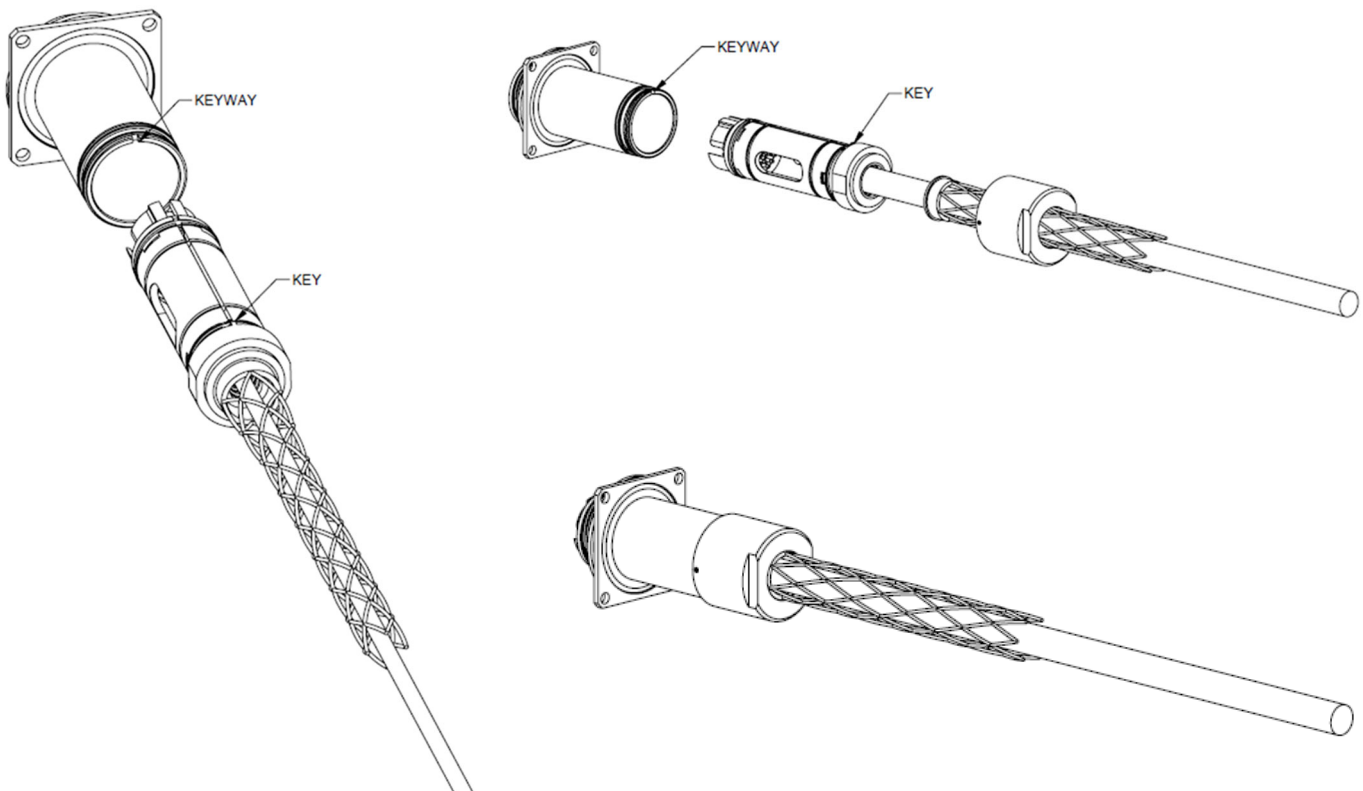
CONNECTOR ASSEMBLY

Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Receptacle Body ensuring that the key inside of the Receptacle Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Receptacle Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Cable Seal and Mesh Grip forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to torque to the values in the Torque Table located in the Appendix.



RECEPTACLE, 12 CHANNEL, NO BACKSHELL

TERMINATION

For 900µm Cable Options

Use the Stripping Length Diagram seen below to Terminate the Fiber. For Fiber Optic Termination and Polishing details, reference CAI-TERM.

For 2mm or 3mm Cable Options

Slide the Crimp Sleeve onto the cable and strip the cable according to the lengths in the diagram seen below. Leave approximately 0.255 Inches (6.5mm) of Kevlar on the cable for crimping. Once the fiber has been inserted into the ferrule, slide the Crimp Sleeve over the Kevlar. Use Fiber Optic Termini Crimp Tool PT-005 to crimp the Crimp Sleeve into place. Reference Fiber Optic Termination and Polishing (CAI-TERM) for details.

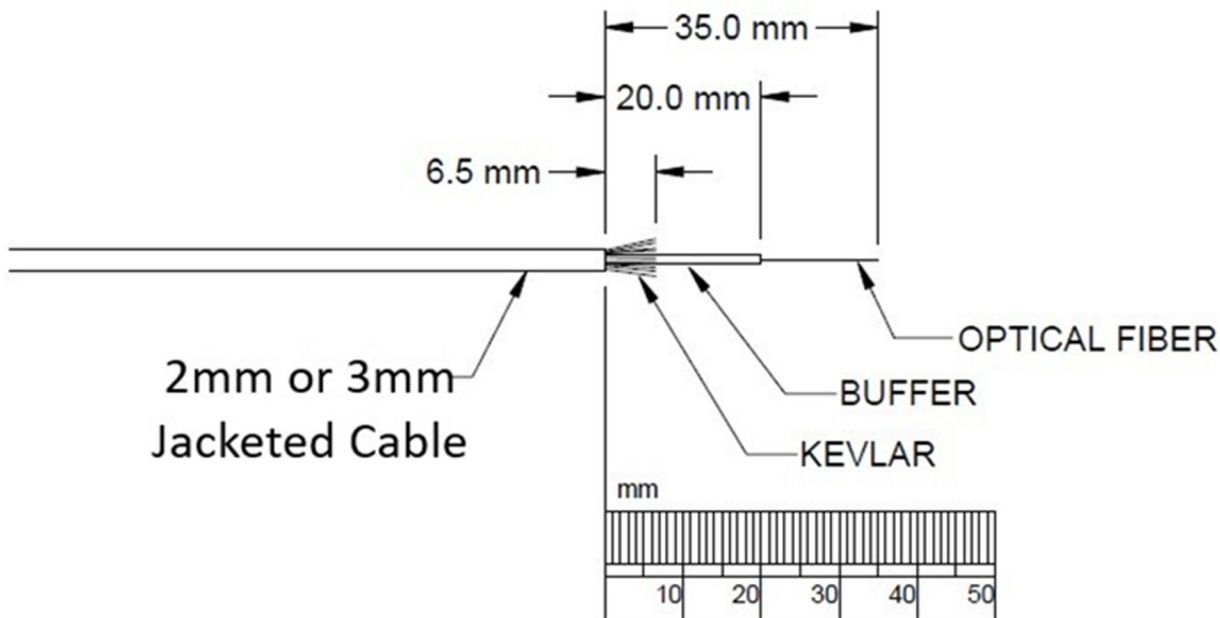
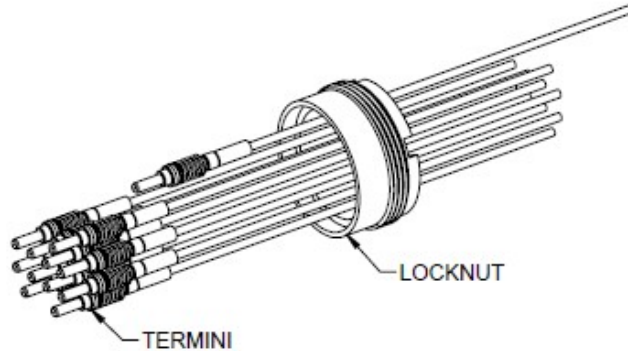


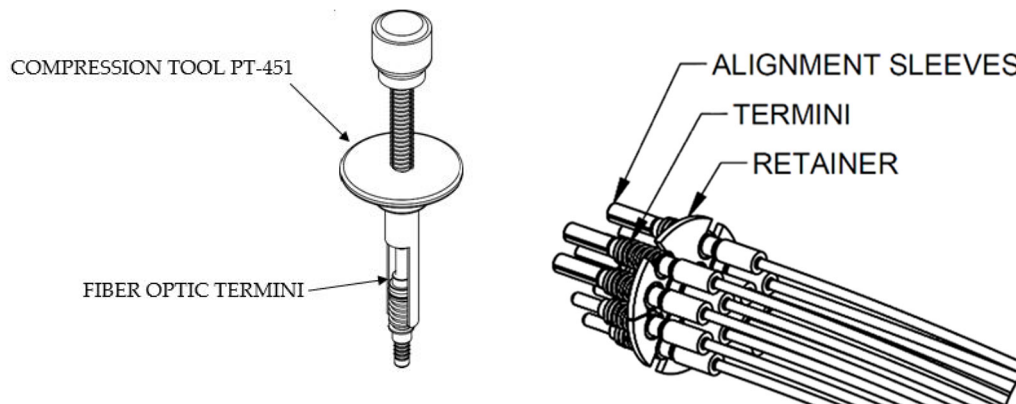
Diagram not to scale.

POPULATE INSERT

Slide the Locknut over the fiber.



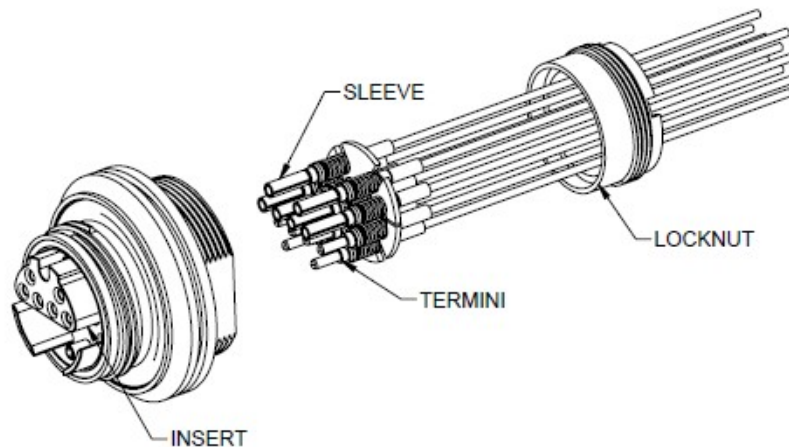
Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate. The Terminus clip should be resting in the Termini Retainer Plate pockets. Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.



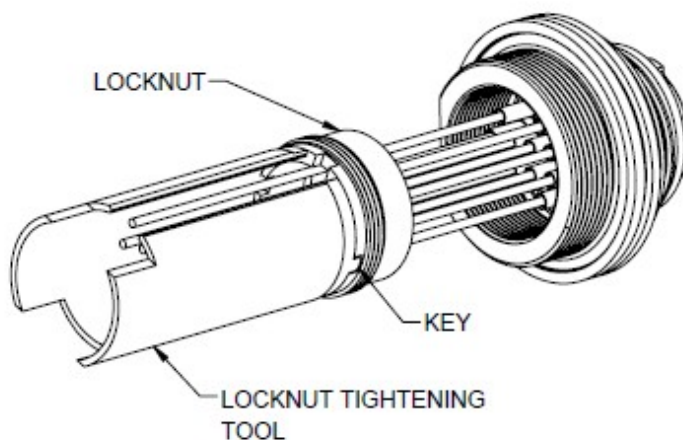
After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S6.

CONNECTOR ASSEMBLY

Install Insert into the Receptacle Body. There is a slot on the Insert back that must align with the key on the inside of the Receptacle Body. Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities. When properly positioned, the Insert cap will protrude ¼ inch from the front of the Insert body.



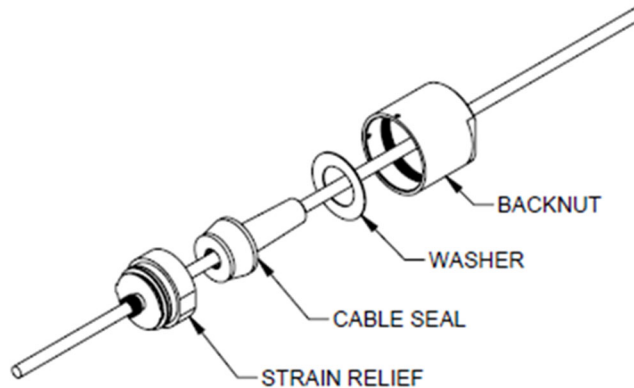
To tighten the Locknut, use the QFoca Locknut Tightening Tool, PT-146 by passing the cables through the tool slot and engaging the keys on the Tool with the keyways on the Locknut. Turn clockwise to tighten the Locknut. Torque the Locknut to the values in the Torque Table located in the Appendix using Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter by tightening the Crow's Foot Wrench onto the flats of the Locknut Tightening Tool.



RECEPTACLE, 12 CHANNEL, STRAIGHT BACKSHELL, BOOT

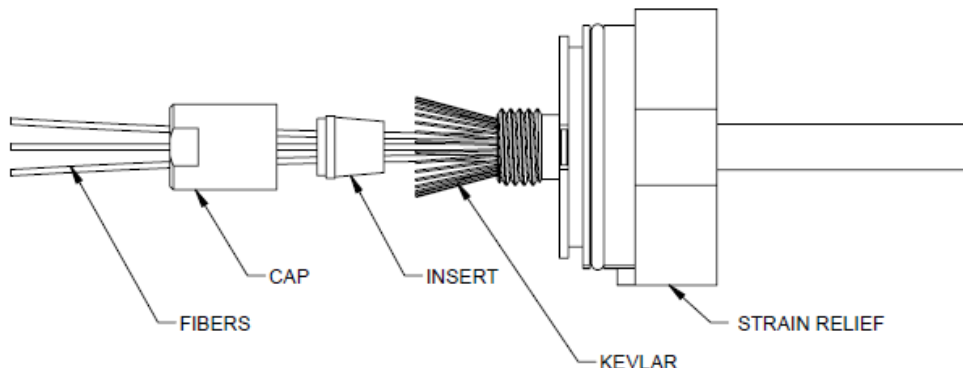
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.



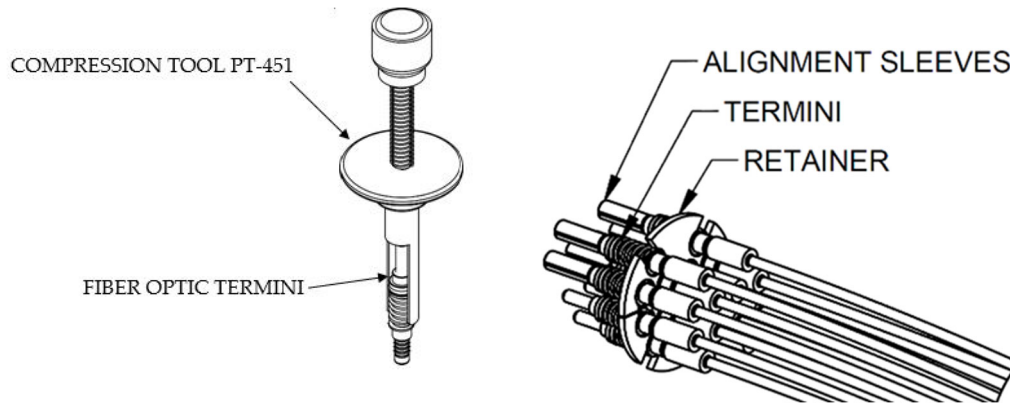
TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

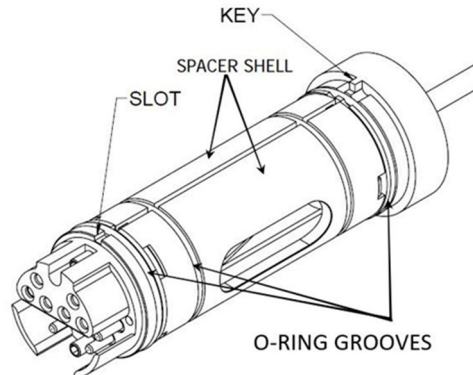


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S6.

CONNECTOR ASSEMBLY

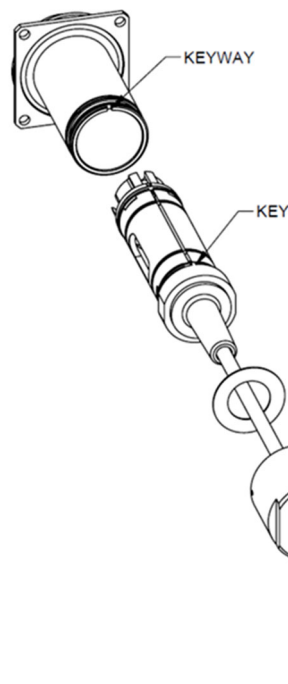
Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the “S” labeled cavities.

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Receptacle Body ensuring that the key inside of the Receptacle Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Receptacle Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Bend Limiter & Washer forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 $\frac{3}{8}$ " x $\frac{1}{2}$ " Square Drive Adapter to torque to the values in the Torque Table located in the Appendix.

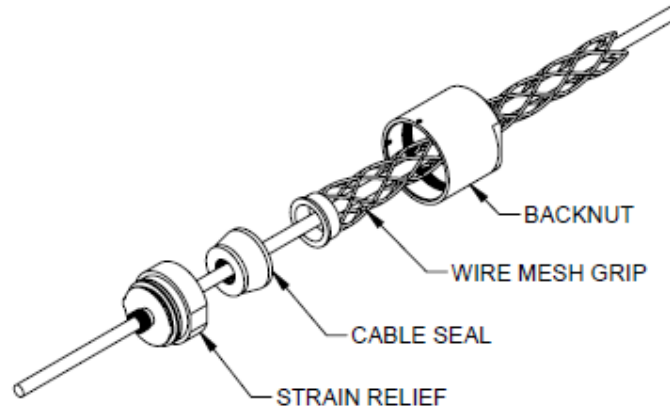
Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.



RECEPTACLE, 12 CHANNEL, STRAIGHT BACKSHELL, MESH GRIP (G1)

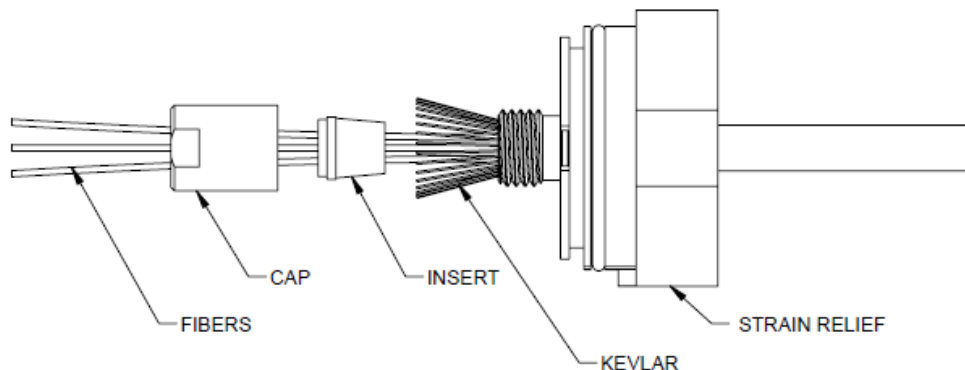
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.



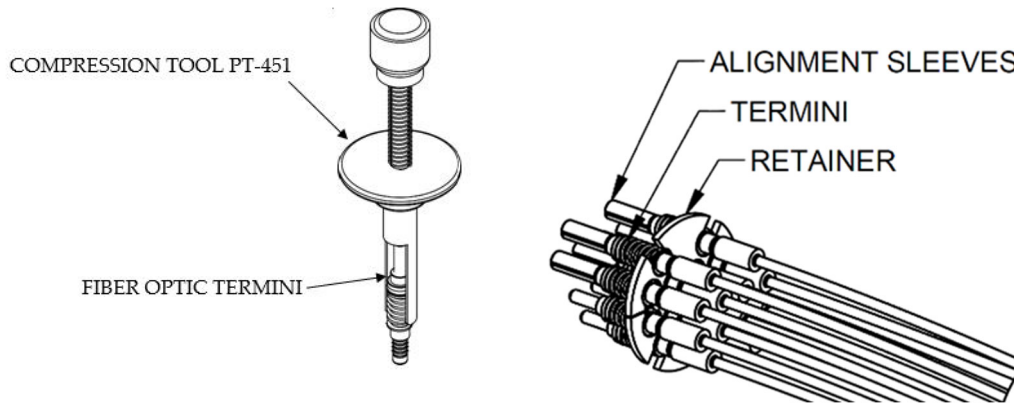
TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Use the Fiber Optic Termini Spring Compression Tool, PT-451, to mount the Fiber Optic Termini on the Termini Retainer Plate. The Terminus clip should be resting in the Termini Retainer Plate pockets.

Note that the counter bores on the retainer plate go to the cable side of the Fiber Optic Termini.

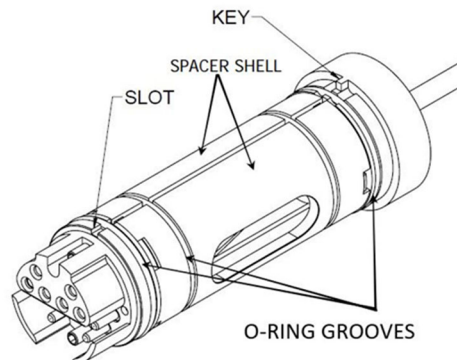


After all Fiber Optic Termini have been mounted on the Termini Retainer Plate, slide the Alignment Sleeves on the socket Fiber Optic Termini channels S1-S6.

CONNECTOR ASSEMBLY

Slide the Fiber Optic Termini mounted in the Termini Retainer Plate(s) into the Insert cavities ensuring that the Sockets with Alignment Sleeves are in the "S" labeled cavities.

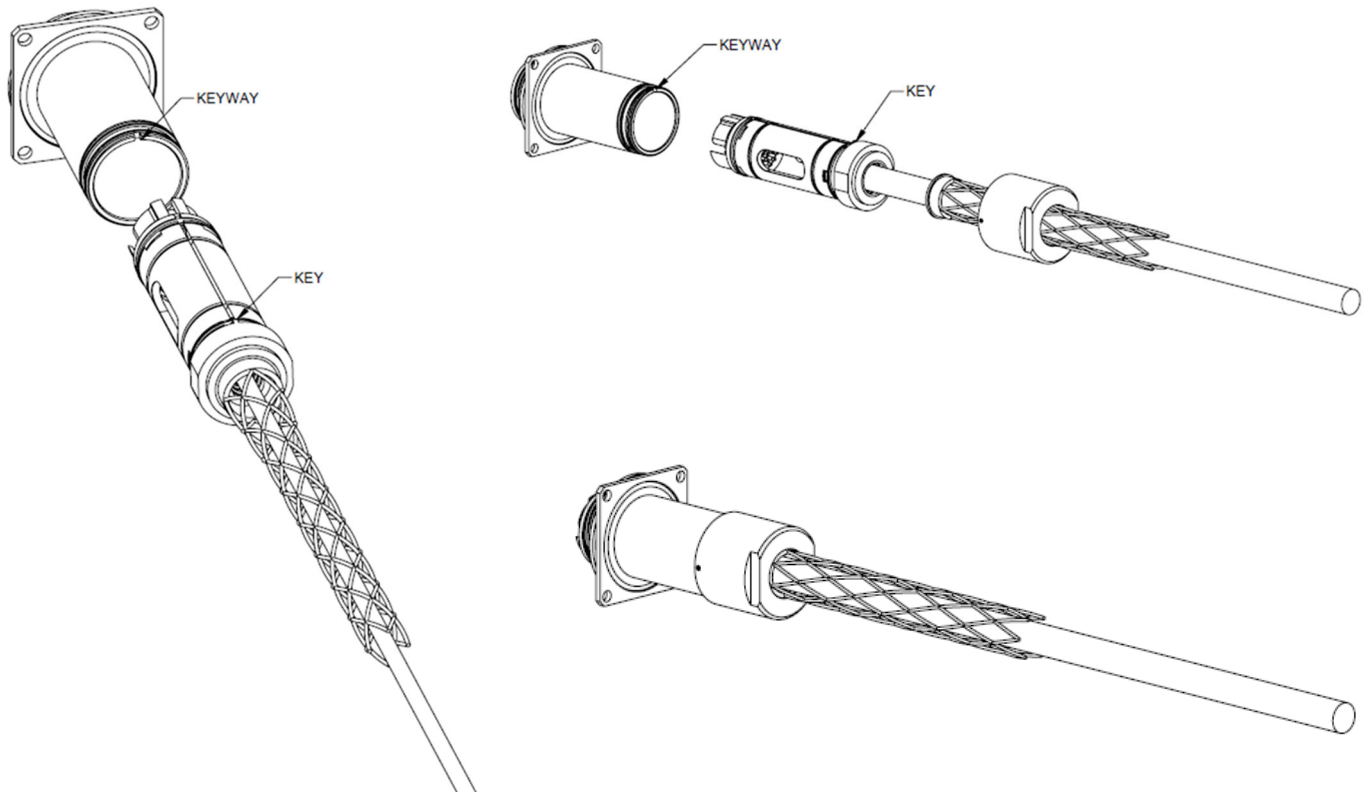
Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Receptacle Body ensuring that the key inside of the Receptacle Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude ¼ inch past the front of the Receptacle Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Cable Seal and Mesh Grip forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table located in the Appendix. Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and

CAI-QFOCA: QFoca Customer Assembly Instructions

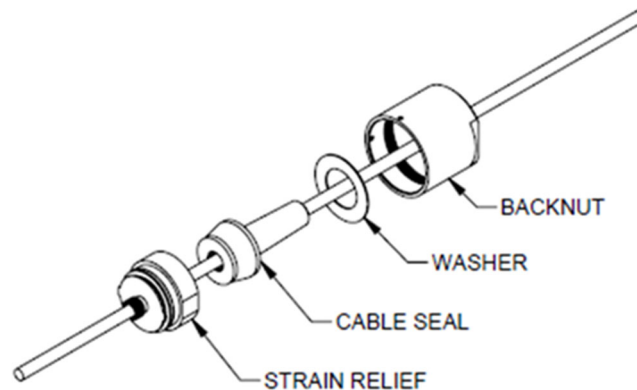
use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.



RECEPTACLE, 24 CHANNEL, STRAIGHT BACKSHELL, BOOT

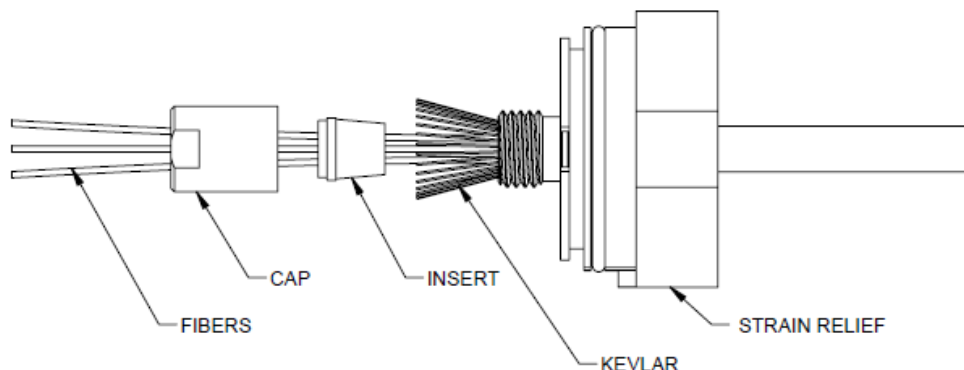
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.

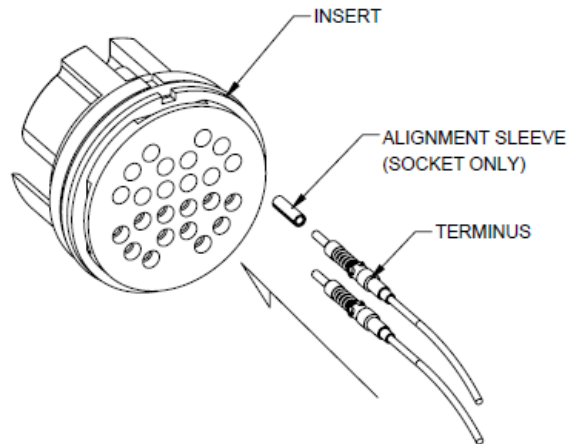


TERMINATION

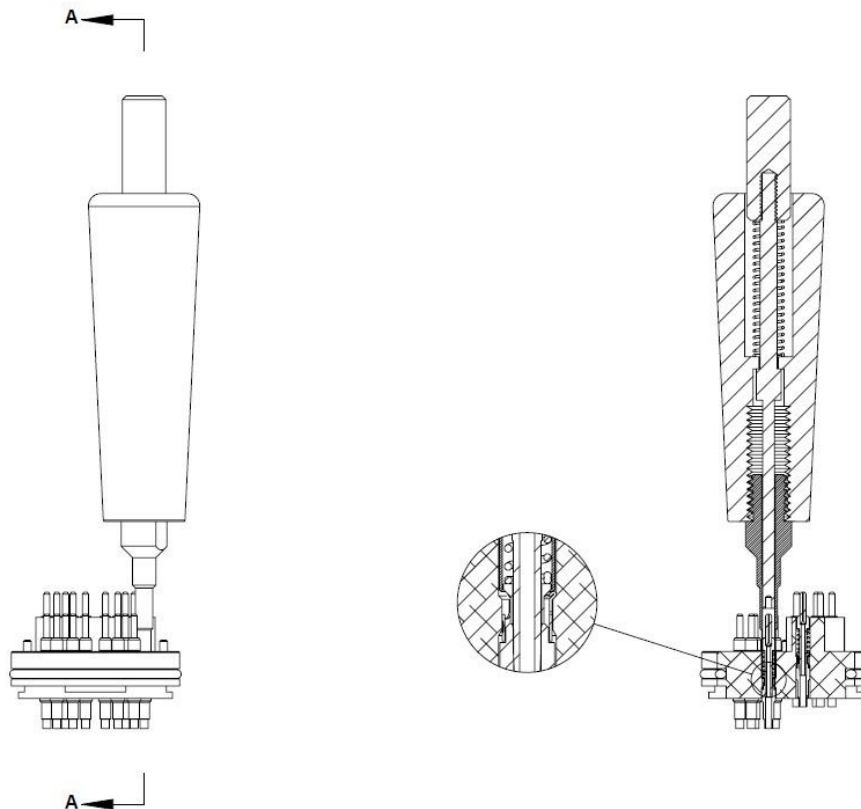
Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Slide the Alignment Sleeves on the Socket Fiber Optic Termini channels S1-S12, and use the Fiber Optic Termini Insertion Tool, PT-001, to populate the Insert with the Termini Pins & Sockets.

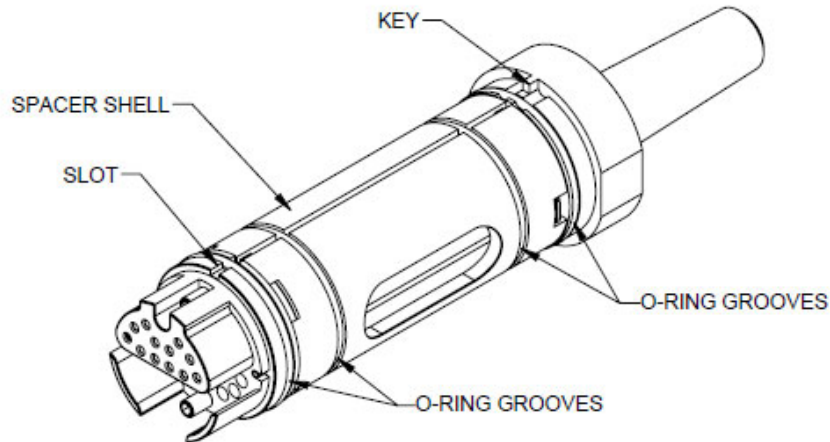


If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to unscrew the Socket Head Cap Screws on the front of the Cap Sleeve Retainer to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini from the front until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to screw in the Cap Sleeve Retainer. Torque screws to the values in the above torque table.

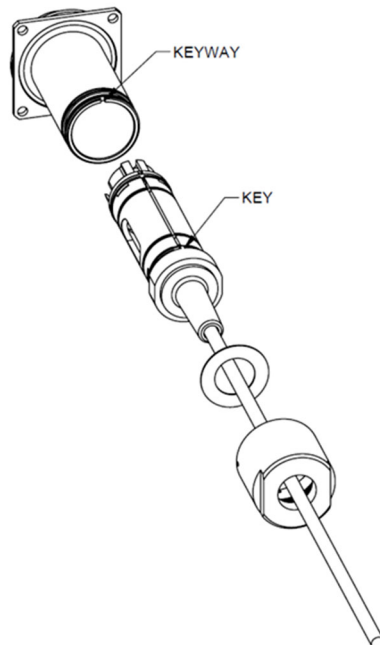


CONNECTOR ASSEMBLY

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



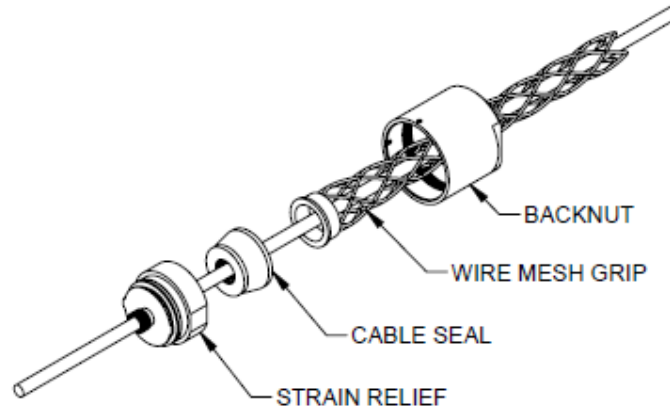
Insert the QFoca Subassembly into the Receptacle Body ensuring that the key inside of the Receptacle Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Receptacle Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Bend Limiter & Washer forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 $\frac{3}{8}$ " x $\frac{1}{2}$ " Square Drive Adapter to torque to the values in the Torque Table located in the Appendix. Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.



RECEPTACLE, 24 CHANNEL, STRAIGHT BACKSHELL, MESH GRIP (G1)

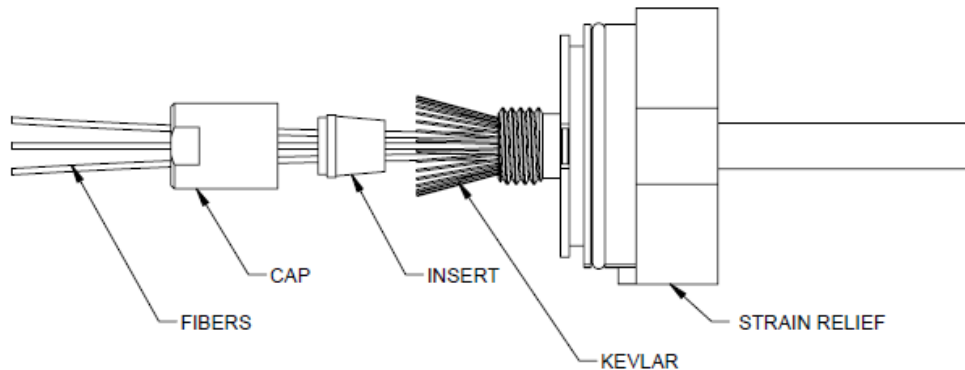
CABLE PREPARATION

Slide parts onto cable in the order below.



Strip the outer jacket of the cable back approximately 6 inches, exposing the buffered fiber and the Kevlar. If the Strain Relief is already on the cable, slide it forward so that the jacketed portion of the cable is as far forward as possible. If the OD of the cable is larger than the ID of the Strain Relief, position the Strain Relief over the exposed fiber and Kevlar so that the cable jacket touches the base of the Strain Relief.

Slide the wedge-shaped Insert Cable Anchor over the buffered fibers and position it in the Strain Relief with the fibers on the inside and the Kevlar evenly distributed around the outside. Push the Insert Cable Anchor into the Strain Relief to trap the Kevlar and trim the Kevlar to length flush with the threads on the Strain Relief. Slide the Strain Relief Cap over the buffered fibers and hand tighten on the Strain Relief. Use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 3/8" x 1/2" Square Drive Adapter to torque to the values in the Torque Table found in the Appendix.

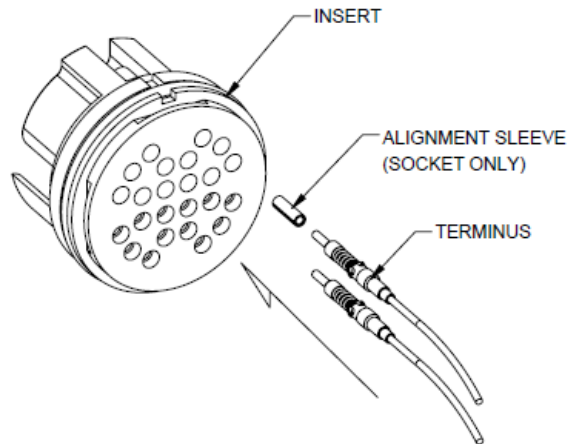


TERMINATION

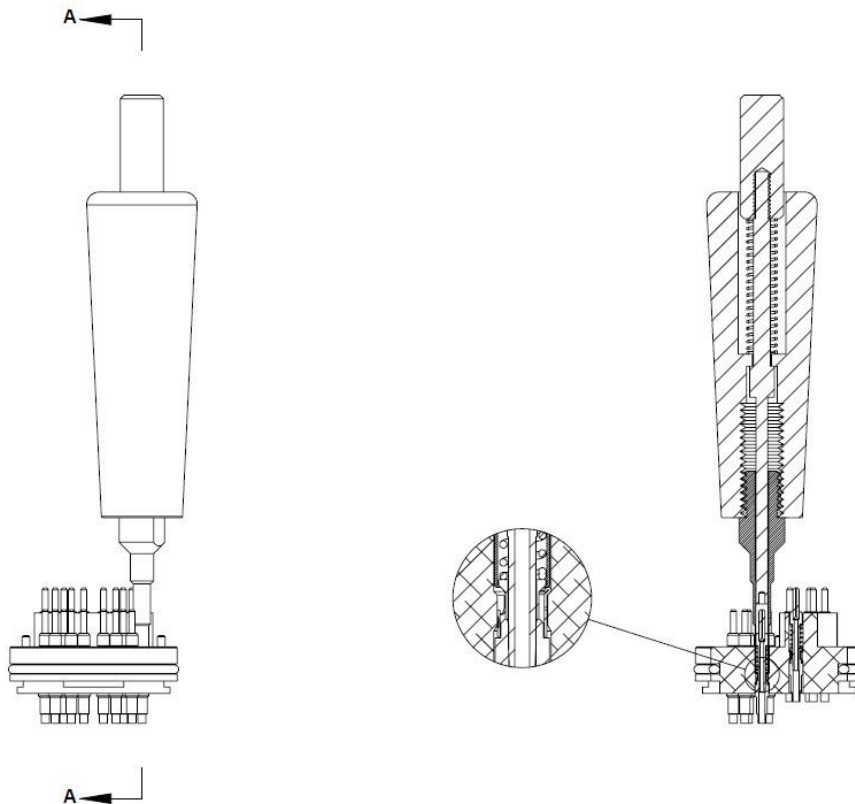
Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

POPULATE INSERT

Slide the Alignment Sleeves on the Socket Fiber Optic Termini channels S1-S12, and use the Fiber Optic Termini Insertion Tool, PT-001, to populate the Insert with the Termini Pins & Sockets.

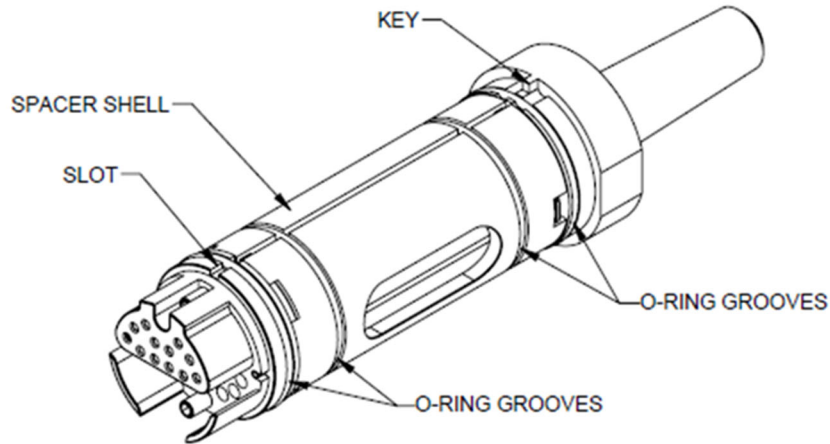


If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to unscrew the Socket Head Cap Screws on the front of the Cap Sleeve Retainer to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini from the front until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 3/32" PT-502 to screw in the Cap Sleeve Retainer. Torque screws to the values in the above torque table.

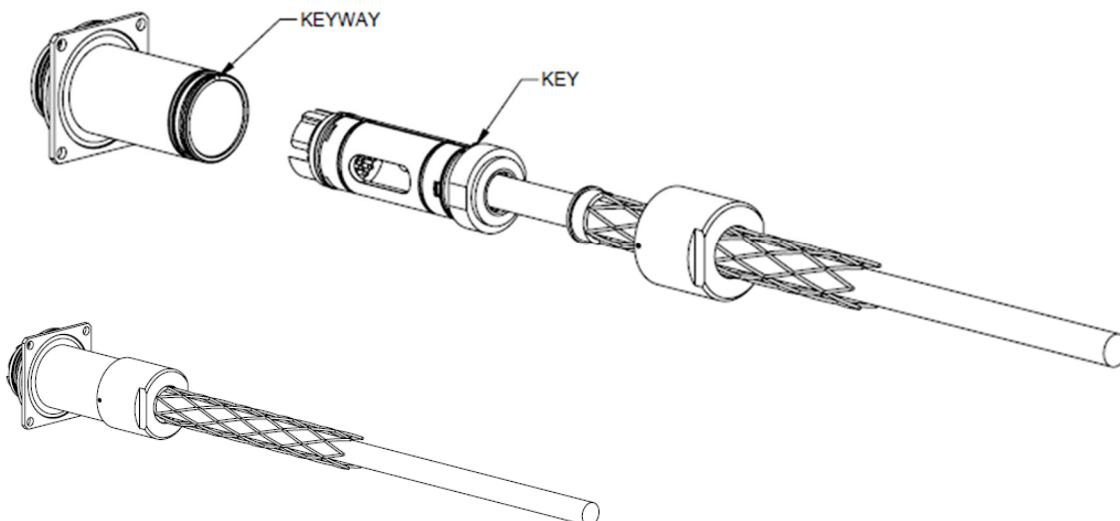


CONNECTOR ASSEMBLY

Attach the two Spacer Shells together ensuring that the slots on the Spacer are aligned with the Keys on the Strain Relief and Insert as shown. Roll the O-Rings over the Insert Cap and slide them down into the grooves on the Spacer Shells. This will hold the assembly together. Perform a final visual check by looking through the holes of the Spacer to ensure that the fiber is not twisted or kinked.



Insert the QFoca Subassembly into the Receptacle Body ensuring that the key inside of the Receptacle Body is aligned with the slot in the Insert. When properly assembled, the Insert cap should protrude $\frac{1}{4}$ inch past the front of the Receptacle Body and the key on the Strain Relief should be fully seated in the slot on the Backshell. Slide the Cable Seal and Mesh Grip forward. Slide the Back Nut forward to the back of the Strain Relief & QFoca Subassembly and use Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-545 and PT-546 $\frac{3}{8}$ " x $\frac{1}{2}$ " Square Drive Adapter to torque to the values in the Torque Table located in the Appendix. Finally, tighten the Set Screws in the Back Nut using 0.05" Hex Driver PT-500 and use Torque-Measuring Screwdriver PT-590 with Hex Bit 0.05" PT-599 to torque to the values in the Torque Table found in the Appendix.



Appendix

TORQUE TABLE

Refer to the Torque Table below for the torque values for various components used in this instruction.

Component		Backnut w/Boot	Backnut w/Mesh Grip	Strain Relief Cap	Socket Head Cap Screw (Insert)	Set Screws	Locknut (Receptacle Only)
Torque Values / Units	In-lb	80 – 97	115 – 133	57 – 66	2.5 – 3.0	2.25 – 2.75	44 – 53
	N • m	9 – 11	13 – 15	6.5 – 7.5	0.28 – 0.34	0.25 – 0.31	5.0 – 6.0

STRIPPING LENGTHS – QFOCA CONNECTORS

WI 851-62 - FIGURE 3.1 – PLUG & RECEPTACLE, 4 CHANNEL, STRAIGHT BACKSHELL, DISTRIBUTION

WI 851-62 - FIGURE 3.2 – PLUG & RECEPTACLE, 6 CHANNEL, STRAIGHT BACKSHELL, BREAKOUT

WI 851-62 - FIGURE 10.1 – SHIPBOARD QFOCA EZ TERMINI

WI 851-62 - FIGURE 3.3 – PLUG & RECEPTACLE, 12 CHANNEL, STRAIGHT BACKSHELL, DISTRIBUTION

WI 851-62 - FIGURE 3.4 – PLUG & RECEPTACLE, 12 CHANNEL, STRAIGHT BACKSHELL, BREAKOUT

WI 851-62 - FIGURE 3.5 – QDRIVE 12 CHANNEL, HYBRID PLUG

WI 851-62 - FIGURE 3.6 – PLUG & RECEPTACLE, 24 CHANNEL, STRAIGHT BACKSHELL, DISTRIBUTION

Revision Change Record

Revision	Date	Section	Description	Approval
0	4/06/2026	New Release	Newly Released Document combining Various QFoca Connector Configurations.	DRG